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American Bee Journal

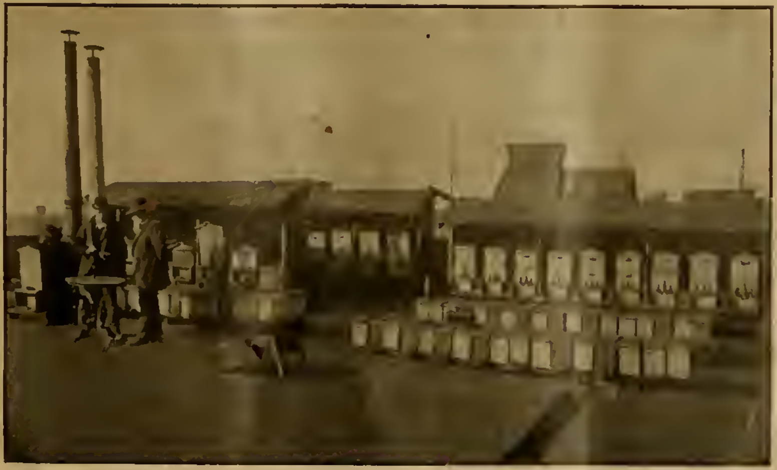
OUR TOIL DOTH SWEETEN OTHERS

MASSACHUSETTS AGRICULTURAL COLLEGE

45th Year. CHICAGO, ILL., JAN. 5, 1905. No. 1.

**C. H. W. Weber,
Son Chas. H.,
Daughter Emma,
and ✣✣✣
Roof-Apiary.**

**CINCINNATI,
OHIO.**



(Engravings used through courtesy of Gleanings in Bee-Culture.)

A PROSPEROUS NEW YEAR.

* * *

Begin now to make ready for next season's harvest. Send for our Catalog, lay your plans, order your Supplies, get them ready. By that time you will find you are none too soon.

We have been working all winter to fill our warehouses and stock our branches and agents. We are better prepared than ever to ship your goods promptly.

But don't put off ordering. There may be some unforeseen delay. Glance over the list below and write to our branch or agent nearest you for Catalog.

Root's goods are the cheapest. You cannot buy good goods for less prices, and we have unexcelled facilities for saving you freight.

* * *

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Vickery Bros., Evansville, Ind.
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There are hundreds of others handling our Supplies, but lack of space forbids our giving their addresses.

THE A. I. ROOT COMPANY,

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ESTABLISHT IN 1861

AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

GEORGE W. YORK, Editor. CHICAGO, ILL., JAN. 5, 1905. Vol. XLV.—No. 1.

Editorial Notes and Comments

Volume Forty-Five—1905.

This week begins Volume XLV. How the years and the volumes of the American Bee Journal are piling up! It will soon be a half-century since it began to be. And some of its readers are growing old, but most are simply growing older. Several of the faithful for many years have lately written us that they are "too old to care for the bees any longer", and so "must also stop taking the old American Bee Journal". There is a touch of sadness in all this. And yet a note of joy, too. These dear old readers have been as faithful as their bees throughout all the passing decades, and no doubt will be ready to depart in a few more years for that Better Country

> ——"the Heaven of rest
> That lieth just over the wall by the tree
> Where the summer-kist apples are best",

as runneth the song, "The Hum of the Bees in the Apple-Tree Bloom".

Midwinter Flights for Cellared Bees.

There are still questions about wintering in the North that will not down. One of them that was somewhat generally considered settled has been lately opened up again by the assertion of Editor Root, that there is a real gain to take bees out of the cellar in February or March on a warm day, and return them after a flight. H. R. Boardman, whose view is given in the last part of his article on page 495, may be said to represent the majority. Let us compare their testimony:

Mr. Root says in Gleanings in Bee-Culture: "While the bees prior to removal were uneasy, they became perfectly quiet after being put back, and continued so for several weeks after".

Mr. Boardman says: "I used to think it necessary, for the welfare of the bees, to set them out for a flight during the winter, but I now prefer to have them remain in until they are set out to stay".

Not entirely conclusive in either case. Granting the truth of what Mr. Root says, is it certain that the bees would not have been as well off at the beginning of the harvest if left in the cellar till taken out for good?

We might do some reasoning on the case. If midwinter flights are a good thing for outdoor bees, as all agree, why not for cellared bees? If bees are stirred up to brood-rearing by being taken out, will not that be a damage to them when returned?

But a mile of such reasoning, or rather questioning, is not worth an inch of good, solid testimony from the bees themselves. That testimony ought not to be hard to obtain. When a day warm enough comes in February or March, let part of the bees be taken out of the cellar for a flight, and then returned. Let this be done by a hundred bee-keepers or more; let them note the difference between the bees taken out and those left; let them report, and all the reports taken together ought to give us something a little more reliable than we have had on which to base an opinion. Will *you* try it and report?

Kerosene for Driving Bees.

Driving bees out of a super by laying over the super a cloth wrung out of a solution of carbolic acid seems to be much more in favor among our British cousins than in this country. Chas. U. T. Burke says this in the Australasian Bee-Keeper:

> "I find more effective a cloth wrung out as dry as possible with kerosene, and placed on top of the frames will hunt every bee out of the supers, and if you are not careful, will hunt the bees clean out of the hives. Be careful and do not let the kerosene cloth remain on for more than a minute at most—30 seconds is quite long enough. The moment this cloth is put on, you hear a buzz, and away go the bees helter-skelter down below, and you can remove as many supers as you like away to your extracting room, and rarely a bee will be found in them."

We should think it *very* important to be exceedingly brief in this operation, else the honey might take on the odor of the kerosene.

Why Do They Lie So About Bees?

H. S. Spence sends the following clipping, which for magnitude in the Ananias-and-Sapphira line is well entitled to the blue ribbon:

> QUEEN-BEES WORTH $200.
>
> Just as there are valuable strains in horses, cattle, and other stock, so there are varieties of queen-bees which are worth many hundred times their weight in gold. The most valuable strain is the Italian, and many Italian bee-farmers demand and receive without question prices ranging from $50 to $200 for a single queen-bee of a certain kind. Such bees are sent all over the world. The owner of a bee-farm near Ottawa, Canada, goes to Europe annually and brings back with him bees of an aggregate value of thousands of pounds. He is enabled through the agency of an Italian firm to effect an insurance upon the most valuable of his queens.—New York Herald.

Along with the clipping Mr. Spence sends the following

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conundrum: "How do you suppose such absurdities get into the papers"?

The answer is not easily given in a few words, although down at the bottom of the whole disreputable business lies the fact that may be given briefly in the words of Barnum, the great showman, "The people want to be humbugged". The papers wouldn't continue to fill up their space with lies if there were no market for them. Knowing this demand, the penny-a-liners are keen on the scent of anything a little out of the ordinary, and with one or two facts, or supposed facts a trifle remarkable, in their possession, they set to work dressing up and magnifying, until one may well ask, "Why do the papers lie so about bees"?

In the present case, the material from which the fabric is reared is probably the following: There was *one* queen which was considered so valuable for breeding purposes that it was valued at $200 by its owners, although no one perhaps would have given one-fourth that amount for that or any other queen. But that seems to be ground enough for a reporter saying that *many* are sending queens at that price all over the world!

It is not to the credit of the New York Herald that such stuff should be admitted to its columns, and perhaps it is less to the credit of the Cincinnati Enquirer to be willing to copy it.

Miscellaneous News ✣ Items

General Manager France says the Texas bee-keepers did not understand what he wrote them about the directorship matter. We thought there must be some misunderstanding somewhere. But no harm has been done, as we can see.

* * *

W. S. Allan, of Mexico, when renewing his subscription recently, wrote as follows:

> "In a late number of the American Bee Journal the question is asked, 'What have you learned in experience during the present year with the bees?' My experience is that the best help in the bee-business is the American Bee Journal."

* * *

Mr. S. A. Niver, formerly of New York State, but lately of Chicago and Wisconsin, has taken unto himself a wife. He was married Dec. 26, 1904, at Whitewater, Wis., to Mrs. Alfarata Hull Jahnke, according to an announcement we received last week. We extend our heartiest congratulations to Mr. and Mrs. Niver. But Mr. Niver certainly did surprise us.

* * *

August Weiss, of New London, Wis., died Nov. 22, 1904. He had been sick with lung trouble for a year and a half. He was only 42 years of age. Mr. Weiss was well known as a comb foundation manufacturer, having invented a process of his own, we believe. On account of ill health he has not been able to push his business very vigorously the past year or two.

* * *

An Old Bee-Keeper and Langstroth.—We have received the following from an old bee-keeper and admirer of Langstroth:

> EDITOR YORK:—Advancing years and failing health compel me to give up bee-keeping for a business. Perhaps it will interest you to know that I am probably the oldest apiarist in the United States, having been in the business since 1856, and during all that time old Father Langstroth has been my only guide, and his is the only book that I would recommend to beginners. WM. SALTSIDER.

Frank Rauchfuss, the able manager of the Colorado Honey-Producers' Association, is reported as saying that that organization is a success, and that its members are well pleased. This is encouraging. But it should be remembered that it is an organization separate from the Colorado State Bee-Keepers' Association. The latter is for the discussion and promotion of matters of interest to all bee-keepers, while the former is a purely business or financial institution, conducted only for its members. There is a wide difference in the two organizations, and such should always be managed separately, we think.

* * *

Better Than a Calendar.—Mr. S. E. Johns, of Franklin Co., Pa., when renewing his subscription for 1905, wrote as follows:

> "I have taken the American Bee Journal for one year, and feel like continuing it, as it is better than an almanac or calendar on account of coming so regularly. It is all right in every respect, and worth five times the small subscription charged for it. In the near future I want to send some new subscribers to it. S. E. JOHNS.

We wish to thank Mr. Johns for his kind words. Yes, and we also want to thank many others for the generous expressions of appreciation they have written us concerning the American Bee Journal. They all help greatly toward pushing on in a good work that, like all other efforts, often has its discouragements.

We hope there may be many who will go out and invite other bee-keepers to subscribe for this Journal. A large number of our present readers have already done so, and with success, but we'd just like to put on our list several thousand more new readers during this month and next. Why can't it be done? Will *you*, reader, try to send in at least *one* new subscription this month? It ought not to be difficult to get subscribers when we furnish 52 copies for only $1.00.

* * *

A Visit to C. H. W. Weber's.—About Nov. 1 the writer visited Cincinnati, and looked in on C. H. W. Weber, and also the Fred W. Muth Co. We had never been in Cincinnati before, so everything was new to us there. We arrived quite early in the morning, and went at once to Mr. Weber's store, where we met him and also his daughter Emma. The son, Charles H., was away on a honey-selling trip, so we did not have the pleasure of meeting him.

The senior Weber worked for some years for the late Chas. F. Muth, whose business he finally bought, and has conducted it ever since. He does a large business in bee-keepers' supplies, bees and queens, honey and beeswax, and also seeds of various kinds. Mr. Weber is one of the leading honey-dealers in this country, especially among manufacturers, his monthly sales being in the neighborhood of 60,000 pounds. He also bottles considerable honey for the grocery trade.

Mr. Weber's son and daughter are his chief assistants in the store, and also in the outside honey-sales.

As most of our readers know, Mr. Weber has perhaps the largest roof-apiary in the world. In it he has about 50 colonies. He also has several out-apiaries some distance from the city.

We are pleased to present to our readers the Weber illustrations on the first page of this week's number. The Weber family are doing a good business in the lines they handle. Their reputation for square dealing is well known. Their advertisement is constantly in our columns, and the space used this year has been considerably increased over that of the past year. If they do not get their share of the honey and bee-supply trade it will not be their fault.

Contributed Special Articles

Honey-Display at the St. Louis Convention.

BY N. E. FRANCE.

To make a display of honey both attractive and educational, I asked the National Association members in every State to save carefully and separately the various kinds of honey produced in their locality. I sent 250 one-pound friction-top cans to have samples mailed in to me, as express rates were much higher. Many bee-keepers expressed their willingness to help me, but said it was a poor season with them, and there were but few kinds of honey they could secure. Samples to the number of 125 came to my home before I went to St. Louis; others came afterward, and still others were sent to the Endeavor Hotel. A large United States map was fastened to the north wall of the convention hall, then bracket shelves were placed across each State, Canada and Cuba, and on them I put most of the honey in 157 one-pound clear-glass jars, with aluminum screw top.

Some choice comb honey was also donated to help the display, but every comb was badly broken in the cartage transfer between the city and the Endeavor Hotel. The only thing I could do with it was to donate it to the bee-keepers' tables at the restaurant.

Before I got the display all on my shelving, I discovered several samples had disappeared, and not taken by the bee-keepers, either. The display was then placed in a side room, where my two sons kept watch of it for two days, until repacked for home. Many bee-keepers, not knowing this, did not get to see it. I did not get the entire display invoiced in time, but the following is what I saved:

NAME.	LOCATION.	KIND OF HONEY.
Fred Muth	Cincinnati. Ohio,	Mangrove (Fla.)
“ “	“ “	Tupelo (Fla.)
“ “	“ “	Sweet clover (Ala.)
“ “	“ “	White clover (Ohio)
“ “	“ “	Locust (Ohio)
P. R. Hobble	Dodge City, Kan.,	Alfalfa
E. Davis	Garden City, Kan.,	“
Wm. Stolley	Grand Island, Neb.,	Catnip
“ “	“ “ “	Cleome
“ “	“ “ “	Alfalfa
“ “	“ “ “	Sweet clover
Frank Rauchfuss	Denver, Colo.,	Alfalfa
A. S. Parson	Rocky Ford, Colo.	Cautaloupe
S. M. Campbell	Mountainburg. Ark.,	Basswood
“ “	“ “ “	Sumac
“ “	“ “ “	Yellow-weed
J. B. Alexander	Lemont, Ark.,	Cotton
“ “	“ “	Sumac
S. M. Campbell	Mountainburg, Ark.,	White-oak
“ “	“ “ “	Hickory
E. A. Simmons	Spring Hill, Ala.,	Poplar
“ “	“ “ “	Cotton
“ “	“ “ “	Sweet clover
I. D. Flory	Yerington, Nev.,	Alfalfa
“ “	“ “	(Label lost)
J. W. Lyell	Reno, “	Sweet clover
“ “	“ “	Alfalfa
“ “	“ “	Dandelion
E. S. Lovesy	Salt Lake City, Utah	Alfalfa
J. F. McIntyre	Ventura, Calif.,	Sage
“ “	“ “	Bean
H. E. Wilder	Riverside, Calif.,	Orange-bloom
“ “	“ “	Wild buckwheat
F. D. Lowe	Bakersfield, Calif.,	(Label lost)
Wm. Lossing	Phœnix, Ariz.	Arrow-weed
“ “	“ “	Mesquite
H. W. Hamilton	Glendale, “	Alfalfa
Hyde Bee Co	Floresville, Tex.,	Catclaw (chunk)
“ “	“ “	Mesquite (chunk)
J. F. Hairston	Salina, Ind. Ter.,	Sumac
D. E. Baker	Oklahoma City,Okla.	
F. W. Van de Mark	Meham, Okla.,	(Label lost)
D. W. Switzer	Roebuck, S. C.,	Poplar
“ “	“ “	Cotton
F. A. Sampson	Ronceverte, W. Va.,	White clover
“ “	“ “	Basswood
Miss O. P. Hendrix	Satartia, Miss.,	Hop-vine
H. E. Hill	Fort Pierce, Fla.	Saw Palmetto
H. B. Henecke	Titusville, “	Palmetto
“ “	“ “	Laurel
“ “	“ “	Cabbage-palm
A. B. Marchant	Apalachicola, “	Tupelo
O. O. Poppleton	Stuart, “	Pennyroyal
“ “	“ “	Mangrove
H. S. Ferry	New York City, N.Y.	(Four kinds)
J. S. Gillfillan	Newark, Del.,	White clover
F. G. Herman	Englewood, N. J.,	Goldenrod
“ “	“ “	Whitewood
“ “	“ “	Heartsease
“ “	“ “	Aster
E. S. Brown	Caribou, Maine,	Dandelion
“ “	“ “	Fruit-bloom
“ “	“ “	White clover
“ “	“ “	Goldenrod
“ “	“ “	Raspberry
W. Z. Hutchinson	Flint, Mich.,	White clover
“ “	“ “	Basswood
E. D. Townsend	Remus, Mich.,	White clover
“ “	“ “	Buckwheat
A. D. Wooda	Lansing “	White clover
F. W. Wilcox	Mauston, Wis.,	Buckwheat
Arthur “	“ “	Alsike clover
“ “	“ “	Basswood
Mose Baker	Granton, “	Raspberry
“ “	“ “	Goldenrod
B. Davenport	Berlin, “	Willow
Joe Kurth	Mineral Point. Wis.,	White clover
“ “	“ “ “	Basswood
G. Wilson	Viola, “	“ “
C. P. Jaeger	Portage, “	Alsike clover
N. E. France	Platteville, “	Clover 28 years old
Mrs. Clara Evans	Lansing, Iowa,	White clover
“ “ “	“ “	Fall flowers
M. V. Facey	Preston, Minn.,	White clover
“ “	“ “	Basswood
“ “	“ “	Fall flowers
J. L. Gray	St. Cloud, “	Basswood
“ “	“ “	White clover
Experimental Sta	Gallatin Valley,Mont.	Alsike clover
“ “	“ “ “	Alfalfa
C. S. Fuge	Orange City, Oreg.,	White clover
John Nebel & Son	High Hill, Mo.,	Spanish-needle
“ “ “	“ “	White clover
Louis Werner	Edwardsville, Ill.,	Melon
J. Q. Smith	Lincoln, “	White clover
Jas. A. Stone	Springfield, “	“ “
Herman Ahlers	Push, Oreg.,	Vine-maple
“ “	“ “	Salmon-berry
“ “	“ “	Fall flowers
“ “	“ “	Fireweed
Arthur C. Miller	Providence, R. I.,	White clover
“ “	“ “	Fruit-bloom

Evaporating Nectar—How the Bees Do It.

BY G. M. DOOLITTLE.

Since the appearance of the article by Adrian Getaz, found on pages 661-3 of the American Bee Journal for 1904, I have been asked several times to give my experience in the matter, some seeming to think it impossible for bees to act as Mr. Getaz says they do, under that part of his article headed "Honey", where he says:

"The bees gather the nectar and bring it home. There they put it in the cells, take it out and put it into their stomachs, put it back, and repeat the operation until the honey is sufficiently ripened. It is then left in the cells until a more complete evaporation has taken place, and then sealed."

This part of Mr. Getaz's article seems to stagger some. One writes, "I never heard of such a thing, nor do I believe it". Another says, "It seems strange that any one would advance such an idea in this enlightened age of bee-keeping. It must be a relic of the dark ages". Still another says, "If such stuff is allowed to appear in our bee-papers, our occupation will be gone, for no one will want any honey after the bees have spit it out of their stomachs".

Gently, friends. Such is not reasoning, or showing a desire to know the truth in the matter. All know that the bee carries its load of nectar from the fields to the hive in its honey-sac; and, as far as I know, no one has the least spleen against honey on that account. And if honey is not contaminated by once entering the honey-sac, would it be any more so if it goes into and out of that same sac several times? Perhaps it would have been more wise had Mr. Getaz called this honey-sac by that name, but the same is, in reality, a stomach, and, if I do not err, Prof. Cook has spoken of the honey, in its ripened form, when coming from that sac or stomach, as "digested nectar". I have always preferred to speak of it as a sac for carrying nectar and honey, and as this sac is used entirely for the purpose of holding honey and nectar, it is as cleanly as if the same was a "thrice washed" vessel used for the storing of said honey after it comes from the hive.

The only point of issue between Mr. Getaz and myself would be that he carries the idea that the field-laborer, when returning with its load from the field, deposits the same in the cells, while all of my observation during the past 30 years says the load of nectar is given to one of the nurse-bees immediately upon the loaded field-bee entering the hive, and, if the same is deposited in the cells before it is evaporated, the nurse-bee is the one to do it. This part is easily proven with an observation hive having only one comb, by watching the loaded bee which comes on the side of the comb next to you. I have sat hours by such a hive during a good flow from basswood, and I never yet saw a bee which had just returned from the field, do aught else with its load of nectar but give it to a younger bee.

This part is also easily proven by those who do not have an observatory hive. Twenty-one days before an expected honey harvest change a black queen for an Italian, or *vice versa*, and 30 to 35 days later take a look at the entrance of the hive at about noon of any pleasant day. Only black bees will be seen returning with their loads. Now look in the surplus arrangement to the hive, where honey is being deposited in the cells, and you will find nearly all the bees there of the Italian race.

"But how is the nectar evaporated?" writes one. "Tell us in the American Bee Journal."

When bees are gathering nectar from the fields they give the same, on entering the hive, to the young or nurse-bees, as I have said above. If no more is gathered than these nurse-bees can hold in their sacs, none is put into the cells. If more is gathered in any one day than their sacs will hold, the surplus nectar is put into the cells by these nurse-bees until evening, and then evaporated down, although this evaporation is going on to some extent during the day. At night all hands join—from the outside laborer with well-worn-out wings, down to bees but a day or two old—when the nectar or thin sweet is taken into the honey-sac, thrown out on the partly doubled tongue, drawn back in again, thrown out and drawn in again, and so on, until by this stirring-up process and the heat of the hive, these small particles of honey are brought to the right consistency, when it is deposited in the cells preparatory to being sealed up in due time.

In order thus to evaporate the nectar, the bees hang loosely or in festoons, so that when the drop of nectar goes out on the partially-thrown-out tongue, it shall not hit another bee, the combs or the hive.

Now, by their great roaring, humming, or whatever we have a mind to call it, the heat is increased in the hive till the nectar is thickened very fast by this stirring up process which is being gone through, as spoken of above. Take a short straw or goose-quill in your mouth and blow a drop of water gently through it out to the end, and then draw it in again, out once more and in again, thus continuing for some time, and you will have an idea of the process, all but the stirring up. This the bees can do better than we can, as it is a part of their trade, and they have the tools to do it with, made on purpose for that very business.

All bee-keepers of any experience can tell whether the bees have been getting nectar of any amount during the day by the roaring they make at night, as bees make this roaring only while reducing their nectar. Let two or three days of rain succeed a plentiful honey harvest, and all roaring will cease with the night of the third day.

Many a night have I watched this process of the reducing of thin nectar to honey, and by the light of a lamp one can see the tiny drops of nectar sparkle as it is thrown out on the tongue and drawn in again. When nectar is coming in slowly you will not be likely to see this process, as it goes on so slow at such times.

All doubtless have observed that when bees are getting honey plentifully, it shakes out of the combs easily, or falls out of its own accord when the combs are turned partly over sidewise, during the afternoon and at night; while in the morning, before the bees go to the fields, not a particle can be shaken from the combs, this going to show that the most of the evaporating of the nectar is done at night.

The economy of the bee-hive is a wonderful study, and the more we study and understand, the more enthusiastic we become, and the more we understand the better our chances of success.

Onondaga Co., N. Y.

Our Sister Bee-Keepers

Conducted by Emma M. Wilson, Marengo, Ill.

Fair Exhibits of Honey Cookery.

> "It's sad, Mr. Acklin. Takes a big lot of honey-sweetened pies to win first prize at a State Fair; and then the judges and supernumeraries eat 'em all up. Pshaw! that's not the spirit that conduces to a first-rate Fair. Such an honor should be held for more than the cost of a few pies."

The above remarks by Mr. Hasty, on page 825 (1904), caused me to look the matter up and see just how much money Mr. Acklin was wasting on honey-sweetened pies, etc., and I was astonished at the amount, for if my arithmetic is all right, he took $110 worth of premiums in all, and $12 of it was for goodies that he—more likely his wife—cooked with honey, including pie, cake, marmalade, jams, and jellies. Either it must have taken quite a number of each of the five kinds to make a display, or they must have been marked up pretty well in price to make it a losing business, with each display at $2.40.

But I really think Mr. Acklin deserves a vote of thanks from bee-keepers in general for his efforts in bringing honey and honey products before the people in the way he is doing. That's what will help the sale of honey.

Making a Scriptural Cake.

"Search the Scriptures"! a lady was heard to observe in a Catonsville car, coming into town. "I have searched the Scriptures this morning from cover to cover and until I was blue in the face, and what do you think I did it for? To find the recipe for a cake!

"A year ago I paid 5 cents at a church fair for an envelope said to contain a card upon which was printed the recipe for a Scriptural cake. It sounded interesting—it certainly ought to have been good; but when I opened the envelope this is what I read: (Here she fished a card from her portemonnaie, adjusted her glasses, and read the following):

SCRIPTURAL CAKE RECIPE.

4½ cups of I Kings, iv, 22.
1 cup of Judges, v, 25, last clause.
2 cups of Jeremiah, vi, 20.
2 cups I Samuel, xxx, 12.
2 cups of Nahum, iii, 12.
2 cups of Numbers, xvii, 8.
3 tablespoonfuls of I Samuel, xiv, 25.
A pinch of Leviticus, ii, 13.
6 Jeremiah, xvii, 11.
½ cup of Judges, iv, 19, last clause.
2 teaspoonfuls of Amos, iv, 5.
Season to taste of II Chronicles, ix, 9.

"Now", she resumed, "I have had that thing in my possession until I have grown to hate the very sight of it. First I thought it would be fun to look it up, and put it on my dressing table. Then I got tired seeing it there and it drifted to the sewing basket. Next I kept it in the machine drawer to measure the hem for curtains. Finally I threw it in the waste paper basket, but the maid spied it and returned it to me as something of value. In desperation I decided to be haunted no more, but look up the exasperating thing and have done with it. This morning I have looked it up; here is the recipe, and I mean to lose the original card before I return home this day". And she laid it maliciously down on the seat opposite her and deliberately got out of the car, leaving it to haunt some one else, but she also left the key to the puzzle, which, being interpreted, readeth as follows:

4½ cups of fine flour, 1 cup of butter, 2 cups of sugar, 2 cups of raisins, 2 cups of figs, 2 cups of almonds, 3 tablespoonfuls of honey, a pinch of salt, 6 eggs, ½ cup of milk, 2 teaspoonfuls of yeast powder, season to taste with spices.—Baltimore Sun.

See Langstroth Book Offer on another page of this copy of the American Bee Journal.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

LATE HONEY NOT ALWAYS DARK.

Sooner or later somebody will "shoot off his mouth" and say that late honey is always more or less dark. Frank Hinderer's experience, page 778, can be stowed away as ammunition to shoot back at him. Honey as white as honey ever gets, being stored when frost cuts it off. We'll not be able to say that this is very common, I reckon.

EXTRACTING FROM COMBS CONTAINING BROOD.

I wish to thank Mr. S. B. Smith for his kindly support in the matter of extracting from combs containing brood. You see, sometimes a fellow feels lonesome and skittish when he atttacks an old and stubborn evil which has a multitude of defenders. Much the better way to make our champion *feel* that there is somebody at his back, rather than remark at his funeral that you always rather admired the way he sailed into giants and things. Page 779.

"ENGLISH AS SHE IS WRIT"—"PAWS" HERE.

Here's advice that that editorial scrimmage about good and bad English, and the paws, be allowed to pause before it extends to very many counters. Has been claimed that there exists a being reputed to have claws—and he bewilders, and oft captures, him who pauses among his clauses with a well-worn but always serviceable proverb: "The man who isn't a fool part of the time is a fool all the time". Well, I don't claim to be ministering in his name exactly (critic might say so perhaps), but I incline to parallel his favorite saw. The man who doesn't write bad English part of the time writes bad English all the time—makes it so stupid and inane in its faultessness that nobody would read it if he could get rid of it. Or, if you prefer to get the thing clear down to hard pan, most of that which is assailed as bad English is not bad—only *different* from the usage of the linguistic Pharisees. The object of language is to make people understand. Do that one thing and pretty much all conducing thereto *is English*, neither more nor less. English is that whereby live people convey live ideas to other live people. Concentrated tincture of grammar-book and dictionary passed from mummy to mummy through a dry-weed stalk—that's not English. Page 819.

FOUL BROOD AND BLACK BROOD.

And here is something which we do not positively know as yet, but which is valuable as one of the working theories to account (it may be) for puzzling differences in bee-diseases. "Some other microbe, which, in *conjunction* with *Bacillus alvei*, changes the general character of the disease so that it gives rise to 'black brood'." Page 728.

SAWING OFF SWARMS ON TREES.

I, for one, regret that so elaborate a set of views illustrating swarming as that of E. R. Root, should show the cluster *sawed off*. The net result of its exhibition will be to confirm a prevalent blunder—evil—nuisance—which is too well established already. Our folks have sawing off "on the brain". Of 1000 swarms which will be cut off bough and all next season, we may be tolerably well assured that 500 could have been taken *easier* by shaking into a basket—to say nothing of the other advantages of so doing. Several hundred of these cuttings off will represent quite an amount of damage done to neighbors' property, with consents very regretfully given—or, worse yet, cut the bough first and ask permission afterward. Full 400 will be more or less shaken off and scattered in the process of cutting off. And 300 will be spilled, in whole or in part, on the road to where they are wanted. Besides this, bees in a basket are much more easily ladled out at just the proper rate as they are wanted. Some 700 of the 1000 swarms will rush around in wrong directions while being hived, simply because too many have been dumped down all in a heap. The cutting off process, when it is a complete success, is a *spectacular* success (that's what ails us,) makes the outsiders stare; but I take it we are not in the business for the purpose of making people stare. Of the minor reforms which we need this is one of the more desirable ones—that getting a cluster into a basket or other receptacle the first thing shall be recognized on all hands as the *regular* way, and all cuttings off exceptional. Page 787.

MR. DITTMER AS NO. 3.

Foundation maker No. 3, with a year's output of 25,000 pounds—pretty well done for Mr. Dittmer. Some ot us maybe would have guessed him down to No. 12 or No. 20. Page 788.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. MILLER, Marengo, Ill.

Keeping Bees in the Woods—Swarming.

I have 60 colonies of bees that have been very much given to swarming, and as they stung the baby badly last summer I must move them out. I think of putting them in an open place in the woods, near the main road, but hidden from it by low pines and cedars on all sides. They are all in 10-frame Jones hives, frames 13 inches deep and 11 inches wide inside, with one story put on for extracted honey, having 12 or 13 frames the same size as the above, and a zinc bottom-board nailed to it. How will they do in the woods, and how shall I manage without any one to hive swarms? They are packed in large four-hive clamps, and remain in the sawdust packing all summer (and winter).

Ten yards from the woods, at the home yard, the squirrels destroyed several supers full of pollen combs last winter, and gnawed right through top-bars 1⅛x⅞. Then the Indians often camp in the corner of these woods about 10 rods away, and might learn to steal the honey, or even the bees, and also white hunters that are constantly passing so near.

I have twice tried to keep down natural swarming in the yard by forced swarming, but they only swarmed the more. Last year I made one out of two strong ones, *a la* Langstroth method. Move A to a new stand C, and most of the brood from B in its place.

I have not clipped very extensively any year, but have thought of doing so if I put them in the woods. I usually put on the supers in apple-bloom, having two or three frames of brood in them to coax the bees up. Next spring I think I will put the queen up also, having her clipped, and at least half the brood.

In "Forty Years Among the Bees" (page 188) you say that it is no little work to look through the colonies every 10 days. I got a pointer from a neighbor farmer bee-keeper in regard to this. He remarked that if the hive were tilted back and a little smoke blown in, the cells could usually be seen at a glance by a practiced eye, and this fact was confirmed at our Toronto bee-keepers' convention by Mr. Hoshal. You would probably find a higher stand more convenient, say those same 6-inch boards on edge and on four flat stones, and the Van Deusen clamps to prevent supers slipping off when tilted back too suddenly. ONTARIO.

ANSWER.—A place so surrounded as you describe by timber ought to be a capital place for wintering bees, and the better shelter ought to make up for the possibly shorter hours of work on some days. You are right that there must be careful protection against squirrels, and especially against their getting a *start*. I suspect that a squirrel will hardly begin gnawing where it can smell nothing, although I don't know. If there is danger of their gnawing their way in at the entrance, coarse wire-cloth, three meshes to the inch, would be a good thing.

It was a mistake to try to keep down swarming by *early* forced swarming. The later the better, only so that it is done before the bees swarm naturally.

The Langstroth plan of making swarms by transposing will postpone swarming rather than prevent it.

If you think of putting the queen in an upper story over an excluder, better try it on a small scale, for I'm pretty sure you'll not like it. But clipping should be tried on a large scale. As you are working for extracted honey, you ought to be able to get along with little or no swarming if you put all the brood in the upper story, giving empty combs, foundation, or starters below, doing this as late as possible without running the risk of their swarming. That would not hinder your putting up one or more frames of brood in fruit-bloom, if you so desire, but leaving the queen below.

While it might be true that with a shallow hive like the Heddon most of the queen-cells could be seen without taking out a frame, it would hardly be safe to trust to it entirely, for too often the bees start cells in places that can be seen only by taking out the frames. You say the cells can *usually* be seen, but to be safe against swarming we must *always* see them.

I think you are right that my stands would be better if the boards were on edge instead of flat, but I have no need to clamp supers and hives together, for it is never necessary to tilt a hive back when supers are on.

Feeding Bees Cane Syrup—Sowing Clovers in Sandy Soil.

1. I have a few colonies of bees, but they do not do very well here at any time. This year they did comparatively nothing. I have been feeding them this fall on pure cane syrup. Is it good for them? I have been told that it would kill them.

2. If it is good for them how should it be fed?

3. Do you think it would pay to sow some kind of clover for them down South on our sandy soil? If so, what kind of clover is the best? I have an orchard of about one acre, and I have been told that clover would do well in it, but it is more dirt land than sandy. I have tried buckwheat, but it does not do well here. LOUISIANA.

ANSWERS:—1. I suppose you mean the unrefined syrup that has never been made into sugar, which would probably be death to bees for wintering in the North; but I don't know about it so far south as Louisiana. If bees can fly about every week, it is possible they might winter on it all right, but for anything I know it is also possible that it wouldn't do. Will some of the Southern readers tell us about it?

2. It could be fed with any of the feeders, or by the crock-and-plate method, either in the hive or in the open air. For the crock-and-plate method, fill a stone crock (a gallon crock is a good size) with the syrup, tie over it a single thickness of heavy woolen cloth, or its equivalent, as five or six thicknesses of cheese-cloth, lay over this a plate upside down; with one hand under the crock and the other over the plate quickly turn the whole thing upside down, and your feeder is all ready.

3. Try sweet clover, sowing it as early as seeds begin to start, and pack or roll the ground hard after sowing. Some have reported failure with sweet clover in some parts of the South, but you may succeed all right. Possibly crimson clover might succeed.

Burr-Combs—Brace-Combs—Langstroth Hive Size—Requeening Colonies.

1. What is a burr-comb?

2. What is a brace-comb?

3. What are the exact inside dimensions of a Langstroth 9-frame brood-chamber?

4. One of my colonies was robbed out last month, the hive containing 18 pounds of honey. The bees clustered on the outside of the hive, and remained there two or three days. I noticed that some of them shook violently when crawling over the cluster. I fixed up another hive with some honey, and put them in it, and they seem all right, and defend their entrance well. This colony is so strong it fills an 8-frame hive-body full. Why did these bees get robbed? Do you think them queenless? Why did the bees shake so when crawling? Were they starving?

5. The main honey-flow begins here about the first of May. If I find some of my colonies queenless in the spring can I get queens from some breeder in time to build them up for the flow?

6. In sending queens by mail what are escort bees put in for? To keep up the temperature, or feed the queen? I have heard it said the queen would starve to death in the midst of plenty if the bees did not feed her.

7. Which will drown the most bees, the Simplicity feeder or the Division-Board feeder; or rather, which will drown the least?

8. In 1902 I had 3 colonies of bees; in 1903, 54; and this year I have 65, and during these three years I have not had a single swarm. What do you think of that? CALIFORNIA.

ANSWERS.—1 and 2. The terms "burr" and "brace" are used somewhat indiscriminately, "burr" more properly referring to bits of comb built over the top-bar or elsewhere, perhaps without connecting two parts together; and "brace" being used to designate bits built between frames or combs, thus serving to brace them.

3. There is no exact dimension. The size of the *frame*, outside measure, is 17⅝ x 9⅛, and the hive must be of a size to accommodate the eight frames, usually with additional room for a dummy. Some allow more room than others for the frames; a hive that I have just measured is 18 5-16 x 12⅛-x 9½, and perhaps the majority nowadays are of that size.

4. I'd like to look the ground over before attempting any reply. It seems an extraordinary thing that a very strong colony should be robbed out and then defend itself well after being changed into another hive. I don't know why the bees allowed themselves to be robbed, and if queenless they would be most likely to be robbed after being changed into another hive. That violent shaking was more likely dancing than starving.

5. Yes, if they have not been queenless too long. If the queen was lost so early last season that only a few very old bees are left, it won't pay to fuss with them.

6. The escort bees feed the queen and keep up the temperature, and it is quite possible that they serve an important purpose in keeping up her spirits by their genial company.

7. There ought to be no difference; neither one ought to drown any bees to speak of.

8. I think I'd like to know how you do it. Please tell us.

Disposition of Foul-Broody Hives and their Contents.

1. Are you acquainted with foul brood?

2. About what time would it do to shake bees on the starters if they have foul brood, that is, how early in the spring? Apple-trees bloom about May 10th or 15th.

3. What would you do with all the supers, one-pound boxes and starters that are in them, also the hives if they are in good condition?

4. What would you do with straight combs from such hives, some of them containing foul brood and others not?

5. I have the "A B C of Bee-Culture," dated 1877. Is this the most up-to-date book I can get for a beginner on this subject? NEW YORK.

ANSWERS:—1. We are not what you might call intimate friends, foul brood never having condescended to make a personal call on me; still I have a speaking acquaintance from having met it elsewhere.

2. "In the honey season when the bees are gathering freely," says Mr. McEvoy. Unless your bees do a pretty heavy business on fruit-bloom, better wait till the opening of the main harvest.

3. Use them.

4. The safe thing would be to melt them up.

5. There is a 1905 edition of the "A B C of Bee Culture," a 1904 edition of Dadant's Langstroth, and a 1904 edition of Cook's Manual. Dr. Howard's pamphlet on foul brood is devoted entirely to brood-diseases.

Honey as a Health-Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food", written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey". It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey the more honey they will buy.

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Some Facts About Honey and Bees.—This is the subject of an article written by Mr. J. E. Johnson, and published on pages 581-82 of the American Bee Journal for Aug. 25, 1904. We have republished it in 4-page leaflet form for general distribution, and furnish it, postpaid, at 35 cents per 100 copies. Send all orders to the office of the American Bee Journal.

Convention Proceedings

THE ST. LOUIS CONVENTION.

Report of the 35th Annual Convention, of the National Bee-Keepers' Association Held at St. Louis, Mo., Sept. 27-30, 1904.

[Continued from page 888.]

The President called upon Mr. N. E. France, the general manager of the Association, to address the convention on a subject not named.

RECOMMENDATIONS OF THE GENERAL MANAGER.

Mr. France—You see I have been idle all the time since I have been here. In just this kind of idleness, almost night and day for a year, I have been working for you. Our secretary, Mr. Brodbeck, wrote me he wanted a program that would be a credit to us and make this convention the best that had ever been—and I believe it is so far—and I said, I am with you in anything to make the National a success. Assign me any topic you please, and if I am prepared I will accept it, and if I am not I will try to be prepared. That is the secret of success in anything. But it has been one continuous strain, day and night, to get material in shape to make this meeting a success. I wanted to put an illustration before this assembled body that has never before been produced, which would educate them, in the form of this map that I had advertised. To illustrate the point in view, if you would take samples of honey branded "white clover" from the various bee-keepers you would find there is a great variance, and that somewhat affects our market. We do not all judge alike. We are not satisfied unless we all have one and the same price.

There are so very many duties that devolve upon this office that I hardly have time at home to know whether my family are there when I get home or not. This year my father, now past eighty, is not able to superintend the work at home, and the two little boys you saw here with one older, have had the whole care of the house, and between 400 and 500 colonies of bees and twenty acres inside the city, which we pay $60 taxes on. Men have asked me, "How many colonies of bees have you got?" Honestly, I don't know. We had somewhere about that number in the spring. I have been home occasionally a day. When I get back there is from one to three baskets full of National Association correspondence, and I am right there at the typewriter until I go away again. So I am sorry to say I come before you to represent the National Association without preparation.

There is one thing I have felt from the beginning and that is, this Association has got upon a living basis; like the National Government at the close of the Civil War, it has now opened its doors to an endless growth. When you think of the endless bee-keepers in the United States, and the comparatively few we have in our ranks, what a chance there is for development! Can we interest those who are not members to become a part of us? Our fees are not standing in the way, for they are nearly all coming in now on the half-rate.

The insurance part of the Association has given me a good deal of anxious, careful study. Hours that I should have had for rest have been, many of them, spent with attorneys who have been kind enough to give me their advice gratuitously. Largely coming from our city bee-keepers who get into quarrels with our neighbors not because of the bees but through their different affairs, and finally the bees are brought in connection with it, and as a result they get into a quarrel and then step, as it were, back and say, "I belong to the National Association, I have got into trouble, you help me out." I am sorry those conditions have come about in our Association. I hoped the day had dawned when we would discontinue that and allow this Association to develop in these new phases of fighting adulterated honey, and creating a greater uniformity of market among bee-keepers over all the world. There are world-wide things we ought to be doing instead of these smaller and not so important matters.

In the extreme West where last year they had such a bountiful honey-flow this year has been a failure in South California, and much has been the correspondence there to save our National from litigation; the bees were in a starving condition. As a matter of fact if there is anything sweet exposed the bees will work upon it, and the swarms of letters that have been poured upon me in behalf of the bees working upon fruit; and the cries that the bees were injurious to it, have been very great, and it seemed for a time the bees were going to be removed from various cities in California. One test case of that finally came up, and we have carried it through to a success, have gained our point, although it has cost the Association about $200 for the attorney's bills; yet it has quieted that section of the country.

For those of us who live near neighbors, and our bees, in the spring perchance should spot the neighbor's clothing, how nicely a little donation of honey, friendly given, or paying for the relaundering of the clothing, would settle all that grievance. If our bees go to our neighbor's trough or place where the water is obtained, and they are an annoyance there, sweeten that away with a little kindly donation of honey. If our bees annoy our neighbors in a garden or upon the near highways, you know they can be sweetened in the same way. Oh, I have gone to various places and have compromised it without any litigation, by just bringing the two parties together and having a little honey and new biscuits. Keep together. compromise, keep out of court. Be brothers hereafter.

You have many topics this morning that you would like to have discussed, and to me one of the most vital things to the bee-keeping industry is to keep our colonies free from disease. The subject is to be fully discussed tomorrow, and I hope you will be here. This National Association is in a shape, if you will join hands in union with me, that it can help you get the desired legislation. This Association can help to check largely this cry about the adulteration of honey, either extracted or manufactured, as it was claimed, in comb, but I can't do it alone; and as the editors of your bee-papers the past summer have asked you to swarm in your letters at designated points, I too have been in the same harness and have done the same. I have written those parties and I have asked others to do so, and I believe it has had some of the desired effect.

I issued a little pamphlet on bees and horticulture for the benefit of those who were receiving injury by people spraying fruit-trees, while in bloom. This became alarming in some parts of our country, and many apiaries suffered severely. The little pamphlet has had its desired effect, and I saw, after those were exhausted and many more called for, wherein I had made a mistake. We should have had it stereotyped so that we could issue more without having it all reset. We need more copies. Later on our city bee-keepers got into trouble and we needed some instruction on what the courts say pertaining to their cases. That also I gathered together as best I could, hurriedly, into a little pamphlet, and it has saved our organization from what looked to be expensive suits. It was this little, red leaflet. I hope the city bee-keepers will commit page 35 to memory pertaining to bees and their neighbors. To the new bee-keepers or new members, if there is any part of this literature they have not received, and will make it known, I will see they get it.

You have stood by the Association in her days of need, and in a financial way it looks now as if it were on a basis of permanency. We haven't any great amount in our treasury. We had about $1,115, I think, at the close of the last year; and, anxious to get this report out early, at the time I closed up that part of the statement here a few days ago it was almost the same amount within a very few dollars—it will be a little shortage on account of this $200 suit which we will have to meet in California, and there are some other things that may reduce that a little, but the additional membership coming in will very nearly off-set that. I don't believe this Association wants a big amount of money lying idle, but I do want to see this Association have a treasury we can fall back upon to spread educational literature abroad.

Let us stop this quarrelsome business, and let the money go in some other way. I believe you know the workings of the Association. I am yours for all there is in it, and I want you to stay by the Association.

N. E. FRANCE.

The President announced the committee on National organization to consist of F. E. Brown, California; H. S. Ferry, New York; E. E. Pressler, Pennsylvania; J. Q. Smith, Illinois, and E. S. Lovesy, Utah.

Mr. Reinecke moved, seconded by Mr. Dadant, that a hearty vote of thanks be tendered Mr. France for his excellent work during the past year. [Carried.]

(Continued next week.)

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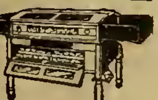

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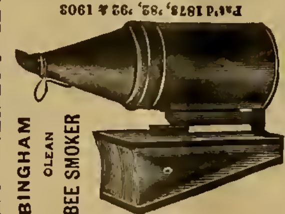

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American Bee Journal (new only)	1.00
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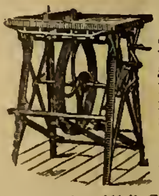

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Tells all about Bees in California. The yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how hey are conducted. In fact the entire field is ully covered by an expert bee-man. Besides his the paper also tells you all about California Agriculture and Horticulture. $1.00 per year; 6 months, 50 cents. Sample copies, 10 cents.

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Reports and Experiences

Bees as a Nature Study.

The issue of Dec. 1 has a call for an "experience meeting" on the subject of bees as a Nature study. The call comes from Dr. E. F. Bigelow. Personally, this has been a very interesting subject. While honey has always had a special attraction for me, as I know it has had for other "kids", my experiments and observations on the life-history of the honey-bee have been interesting, fascinating and instructive in the highest degree. The Good Book says: "Go to the ant and be wise". I think if the people then had known as much about the honey-bee as we do, it would have said: "Go to the bee and learn many wonderful things". (Possibly it might also have added, and "sweeten up".) Perhaps ants also include bees, as they are related. If so, the above suggestion does not hold good.

The life-history of the bee will furnish a most interesting study for scientific students just as an observatory

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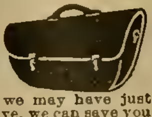

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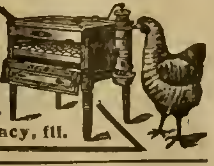

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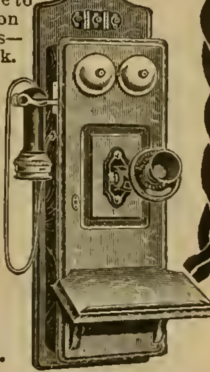

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Alley's Queen and Drone Trap, 35c

It automatically catches and cages drones and queens. It insures you against loss of bees through swarming by catching the queen and preventing her leaving the hive. It will also prevent drones from entering the hive.

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hive is an interesting sight to the average person. It was my pleasure, last summer, to exhibit bees at two county fairs. Also to prepare an exhibit for the Milwaukee Public Museum, where students from the city schools come for Nature study. Nature study here readily adapts itself as an object lesson for mere idle curiosity seekers to most accurate study for scientific observations; particularly for microscopic observations. I need but mention the adaptability of the subject for reading lessons, as the work of most readers that have come under my observation embodies more or less of this subject. I have also found it well adapted for language work, both for information lessons and language drill.

In closing, I want to add a suggestion and caution. Get your information from a reliable, up-to-date bee-keeper or some standard books. Considerable interest has of late centered around school libraries. The State superintendent of schools issued a

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catalog of books as a guide for schools. Under the heading of bees I found quite a list of books, most of which I was satisfied were worthless in a large measure. A. I. Root's publications were, of course, ignored. No mention was made of "Langstroth on the Honey-Bee", nor of Prof. A. J. Cook's "Manual", etc. I asked the compiler why a book or two from a bee-keeper's library was not put in, but my question was ignored. H. H. MOE.

Lafayette Co., Wis., Dec. 14.

White Clover—Golden Italians—Shipping Queens.

My report for 1904 is about 850 pounds of honey-dew and 1050 pounds of fall honey, all extracted from 34 colonies, spring count.

I am afraid bees will not winter well on account of honey-dew being left in the hives for winter stores.

The prospects for white clover honey are not very promising. We have had an unusually dry fall, and I am afraid the white clover is much damaged. There is about 4 or 5 inches of snow now, and it remains to be seen whether or not it will benefit the clover.

During the past summer a good deal was said about the merits of golden Italians, and somebody asked for the experiences of those who had them. I have kept them since they were first advertised, and nearly all of mine are of that strain. In 1903 my 33 colonies, spring count, produced 8360 pounds of honey, mostly extracted, or an average of 253 pounds per colony. I would like

20th Century Wonder Made entirely of metal and asbestos—fireproof. The
CYCLE HATCHER
is wonderfully efficient. Fifty egg size $5.00. Catalogue free.
Cycle Hatcher Co., Box 224, Salem, N.Y.

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Box 99, Beatrice, Neb.

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Langstroth on the ✻✻✻ Honey-Bee

Revised by Dadant—Latest Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.20, or club it with the American Bee Journal for one year—both for $2.00; or, we will mail it as a premium for sending us **THREE NEW** subscribers to the Bee Journal for one year, with $3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

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Davenport, Iowa, 213-215 W. 2d St
Please mention the Bee Journal. 36A26t

to know how much better those so-called long-tongued red-clover bees have done? I find the golden Italians quite as gentle as the 3-banded bees, but the difference is small.

A great deal has also been said about poor queens, and much of the blame has been put on the shoulders of the queen-breeder. When the Italians were first introduced into this country there was no such complaint. All the queens were then shipped in small boxes with from about 50 to 100 bees, enough to form a small cluster to keep the queen warm during chilly weather, and to make their prison a little more homelike. I fully believe the shipping of queen-bees by mail has proved a curse rather than a blessing to bee-keepers. FRED BECHLY.

Poweshiek Co., Iowa, Dec. 18.

Hail-Storms Disastrous to Honey-Crops.

The honey crop in Prowers County has been only fair the past season, in some parts scarcely any surplus. The hail plays such havoc when it strikes the bloom and nectar-yielding plants that the honey crop can not be counted on until harvested.

Mr. Frank Benton's advice about crossing the Italian with the Carniolan bee, and raising sandy vetch for pollen, would do good if again published. JOHN S. SEMMENS.

Prowers Co., Colo., Dec. 20.

This Is Bro. Jonathan—the jovial trade-mark of that handsomest of farm papers, *The Fruit-Grower.* It is full of "meaty" information for successful farming and fruit-raising. Yearly subscription 50c. Send 25c and names of 10 persons interested in fruit-growing, for a year's trial. *Eastern Edition* for States east of Ohio. The Fruit-Grower Co., 206 S. 7th, St. Joseph, Mo.

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on the **Best Dovetailed Hive made.** Cheaper than the cheapest. Circular ready to mail. Don't miss it. 200 second-hand hives for sale cheap.

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Why? A whole case of **Raisins**
Not because you could not use them,
But because on account of the price heretofore paid you have learned to regard raisins as a holiday luxury only.

We are shipping out several carloads of CHOICE SEEDED RAISINS in 16-oz. cartons, 50 cartons to case, from which you can lay in a winter's supply at $3 85 per case, or two cases for $7,50 f.o.b. either Chicago or Denver, Colo.

Address, **H. L. WEEMS,**
P. O. Box 267, CHICAGO, ILL., or
H. E. TENNEY,
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☞Reference, American Bee Journal. 51A4t

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100 pieces an hour—all clean with BUSY BEE WASHER. No injury to finest fabrics. It's simple, quick, cheap. *Agents Wanted.* Address
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That covers the whole Apicultural Field more completely than any other published,
Send $1.20 to
Prof. A. J. Cook, Claremont, Cal.,
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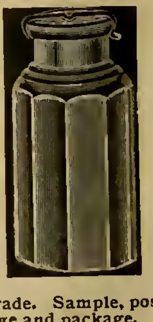

We can ship at once on receipt of order, 1-lb. and ¾-lb. Tip-Top Honey-Jars, (octagon shape) at these prices, f.o.b. Chicago:
1-lbs. per 12-doz. crate, $5.00; 3 crates, $13.50.
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YORK'S HONEY-VINEGAR

This is a new thing, made by The York Honey Co., and should be used by all who also buy and use honey Furnish it to your home trade. Sample, postpaid, 10 cents, to pay postage and package. A 10-gal. keg for $3.00, f.o.b. Chicago.

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CONVENTION NOTICES.

Vermont.—The 30th annual meeting of the Vermont Bee-Keepers' Association will be held in the parlors of the Addison House, in Middlebury, Vt., on Thursday, Jan. 12, 1905.
Shoreham, Vt. W. G. LARRABEE, Sec.

Kansas.—The annual meeting of the Kansas State Bee-Keepers' Association will be held at Topeka, Jan. 10 and 11, 1905. All persons interested in bees are urged to be present.
Topeka, Kans. O. A. Keene, Sec.

Wisconsin.—The Wisconsin State Bee-Keepers' Association will meet in the Supervisor's Room in the Court House, at Madison, Feb. 1, 2, 1905. All bee-keepers are invited to attend.
Augusta, Wis. GUS DITTMER, Sec.

New York.—The Jefferson County Bee-Keepers' Society and New York State Association will hold their meeting in the City Hall, Watertown, N. Y., Jan. 17 and 18, 1905. The general manager, N. E. France, and other prominent bee-keepers, are expected to speak.
Black River, N.Y. GEORGE B. HOWE, Sec.

New York.—A bee-keepers' institute will be held Jan. 9 and 10, 1905, in Canandaigua, N. Y., under the auspices of the Bureau of Farmers' Institutes. Mr. N. E. France has been engaged

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THE BEST MADE.

Root's Goods at their factory prices. SEEDS for honey-plants.

C. H. W. WEBER, 2146-48 Central Ave. CINCINNATI, OHIO.

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by the Department of Agriculture as speaker. There will be two sessions each day. The business of the Ontario County Bee-Keepers' Association will be transacted during a part of these meetings. F. Greiner, Sec.
Naples, N. Y.

New York.—A bee-keepers' institute, under the auspices of the Bureau of Farmers' Institutes of the State of New York, will be held at Fulton, N.Y., Monday, Jan. 16, 1905. Mr. N. E. France has been engaged by the Department of Agriculture, as speaker. The annual business meeting of the Oswego County Bee-Keepers' Association will be held at the same time and place. Chas. B. Allen, Sec.,
Central Square, N. Y.
Mortimer Stevens, Pres.

New York.—The Fulton and Montgomery Counties Bee-Keepers' Society will hold the next meeting at Amsterdam, N. Y., Thursday, Jan. 19, 1905, in connection with a bee-keepers' institute. Arrangements have been made with F. E. Dawley, Chief of the Bureau of Institutes, to furnish Mr. N. E. France, General Manager of the National Association, as the principal speaker, and all are cordially invited to come. This will also be the annual business meeting of the society. T. I. Dugdale, Sec.
West Galway, N. Y.

Nebraska.—The annual meeting of the Nebraska Bee-Keepers' Association will be held at the Experiment Station at Lincoln, on Monday, Jan. 16, 1905, at 2 p.m. Will you be there and favor us with a paper along the lines of bee-keeping in which you are particularly interested? It is hoped that Ernest R. Root will be present for a good talk. Headquarters will be at The Windsor Hotel, where cheap rates have been secured. This will be one of the first meetings in the weeks' series; let us have a good one. L. D. Stilson, Sec., York, Nebr.
E. Whitcomb, Pres.

New York.—A series of bee-keepers' meetings have been arranged for in this State, as follows: Canandaigua, Jan. 9, 10; Auburn, Jan. 12; Syracuse, Jan. 15; Watertown, Jan. 17, 18; Romulus, Jan. 11; Cortland, Jan. 13; Fulton, Jan. 16; Amsterdam, Jan. 19. Mr. N. E. France, the general manager of the National Bee-Keepers' Association, has been engaged to address the meetings, by the State Department of Agriculture, through the Bureau of Farmers' Institutes, F. E. Dawley, Director. The convention at Watertown, Jan. 18, will be the meeting of the State Association, at which many of the progressive bee-keepers of this and adjoining States are expected to be present and take part in the discussions.
C. A. Howard, Sec. W. F. Marks, Pres.

Michigan.—The Michigan State Bee-Keepers' Association will hold its annual convention Feb. 23d and 24th, at the Eagle Hotel in Grand Rapids. The Eagle Hotel is located at 65 to 71 Market St., cor. of Lewis St., one block south of Monroe St. It will give a rate of $1.50 per day, and furnish a room free for holding the convention. The Michigan State Dairymen's Convention will meet in Grand Rapids at the same time, and advantage may be taken of this fact to secure reduced rates on the railroads. When buying your ticket, ask for a certificate on account of the Dairymen's Convention. The secretary of the Dairymen's Association will sign this certificate which will then enable the holder to buy a return ticket for one-third fare. Several associations often thus meet at the same time and place, the secretary of one association signing the certificates for all of the associations, the same being done with the knowledge and consent of the railroads—it simplifies matters. Grand Rapids is the second largest city in the State, easily accessible from the north, south, and central parts of the State, in the heart of a good bee-country, and, with the low rates assured, there should be a large crowd in attendance.
W. Z. Hutchinson, Pres.

Honey and ⁂ Beeswax ⁂

Chicago, Dec. 7.—The market is well supplied with all kinds of honey; the demand is of a light nature. Fancy comb honey brings 14c, but quality as well as appearance is necessary; No. 1 sells at 12½@13c; off grades difficult to move at 1@3c less. Extracted, choice white, 7@7½c; amber, 6@7c, with off grades about 5½c per pound. Beeswax, 30c.
R. A. Burnett & Co.

New York, Dec. 7.—Receipts of late have been quite heavy, and while there has been a fair demand, it has not been up to former years and stocks are somewhat accumulating, consequently prices show a tendency to decline, and in large lots quotation prices as a rule are shaded. We quote fancy white at 14@15c; No. 1 white at 12@13c; amber, 11c; buckwheat, 10c. Extracted in fair demand at 6@6½c for white clover; 5½c for buckwheat; 50@60c per gallon for Southern, according to quality. Beeswax firm at from 28@29c.
Hildreth & Segelken.

Kansas City, Dec. 22.—The honey market here is slow and prices rule low, fancy white comb honey selling at $2.25 per case; other grades as low as $2.00. Extracted from 5½@6½c per pound, and in fairly good demand. Beeswax in good demand at 30c. We look for a better market later on. C. C. Clemons & Co.

Philadelphia, Dec. 24.—As usual around the holidays, there is not much call for either comb or extracted honey. Prices remain about the same as the last quotations. Some odd lots having arrived in the market in the last 10 days weakened the price of lower grades. Fancy white comb, 15@16 cents; No. 1, 13@14c; amber, 11@12c. Extracted, white, 7@8c; amber, 6@7c. Beeswax, 26c.

We are producers of honey and do not handle on commission. Wm. A. Selser.

Boston, Dec. 22.—During the honey season the honey demand has been practically at a stand-still. Stocks seem to accumulate rather than to diminish. While prices are practically as per our last, yet on the whole, the tendency seems to be to a lower level. Our market today is practically as follows: Fancy white, 16c; A No. 1, 15c; No. 1, 14c, with practically no demand for No. 2. Extracted, from 6@8c, according to quality.
Blake, Scott & Lee.

Cincinnati, Dec. 10.—The demand for honey at the present time is not good, owing to the approach of the holidays, when too many sweets are found on the market. On the other hand, the trade is well supplied with comb honey, that will require a considerable length of time to be consumed. We are offering white clover extracted honey in barrels and cans at 6½@8½ cents; amber, 5¾@6½c. Fancy comb honey, 12½@14c. Beeswax, 29@30c.
The Fred W. Muth Co.

Albany, N.Y., Dec. 26.—Comb honey is moving off very well considering the heavy receipts and cold weather. Prices not as high as early fall, as usual, but very good yet. Fancy white, 14@15c; No. 1, 13c; mixed, 12@13c. Buckwheat, 11@12c; mixed, 10@11c. Extracted, dark, 6@6 c; light, 6½@7c. Beeswax, 28@30c.
H. R. Wright.

Cincinnati, O., Dec. 19.—Comb honey is now coming in more freely, and prices if anything have moderated a little. The sales made and prices obtained were for No. 1 fancy water-white comb, 12@13½c; single cases, 14c. Extracted is sold as follows: White clover, in barrels, 6½c; in cans, 7½@8c; amber, in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c.
C. H. W. Weber

San Francisco, Dec. 14.—White comb, 1-lb. sections, 11½@12½c; amber, 9@11c. Extracted white, 6@6½ cents; light amber, 4½@5½c; amber, 3¾@4¼c; dark amber, 3@3½c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

The market is quiet. Stocks are not of large volume, either here or in the interior, but some of the principal holders are urging honey to sale, being desirous of effecting a clean-up at an early date.

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American Bee Journal

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45th Year. CHICAGO, ILL., JAN. 12, 1905. No. 2.

WEEKLY

AN OUT-APIARY OF H. G. ACKLIN, IN HENNEPIN CO., MINN.
(See page 20.)

A PROSPEROUS NEW YEAR.

* * *

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GEORGE W. YORK, Editor. CHICAGO, ILL., JAN. 12, 1905. Vol. XLV.—No. 2.

Editorial Notes and Comments

Getting People to Use More Honey.

This is a subject that should interest every producer of honey. We would like to invite those who have had successful experience along this line, to tell about it. Something should be done to get more people to consume more honey. We have often said that we believed that honey should become a daily food—on every table in the land. It is not so now. We believe if the facts were known, but a very small percent of the American families ever use any honey. And why? We believe it is because so few people know the real value of honey as a food.

Quite a number of people seem to think that honey is good only for a cold—to be taken simply as a medicine! This is a great mistake. Not that honey is not a good remedy for certain physical ailments, but it is a mistake not to use it more regularly as a food. It should take the place, to a larger extent, of sugar, or even certain spreads for bread.

It seems to us that here is a field for some of the best thought that can be brought to bear on it. Why is not more honey used by the ordinary families of to-day? What can be done by bee-keepers to induce them to use it more than they do?

Shaken Swarms 39 Years Ago.

The Canadian Bee Journal reprints an article by George W. House, which appeared in the Bee-Keepers' Magazine for May, 1880. It gives the *modus operandi* for shaking swarms, which, Mr. House said, they had been practicing for 15 years. That would make the plan at least 39 years old. "There is no new thing under the sun."

Baby Nuclei for Fertilizing Queens.

Opinions differ as to the feasibility of fertilizing queens with the very small number of bees used in the so-called baby nuclei; but, on the whole, they seem to be gaining in favor. Some think they may be used by professional queen-breeders, but not by the rank and file of honey-producers. There is no reason why the honey-producer, with only a dozen colonies, should not use baby nuclei as well as the man who rears queens for a living, if he is willing to be at the expense of procuring the proper paraphernalia.

Yet, at the Chicago convention, Dr. Miller urged that these miniature colonies could be used for fertilizing queens—as they had been used by himself—without anything other than the ordinary hives in use, and a few one-tier wide-frames to hold one section each.

The question has been raised whether, in ordinary hands, these baby nuclei would succeed in the cooler portions of the country, early or late in the season. In ordinary hands—indeed, in the most skillful hands—there is likely to be trouble in getting virgins fertilized at any time out of the honey season, even with strong nuclei, and with the honey-producer there is little necessity for it. The experiment can easily be tried by any one, even if he uses only cells obtained from colonies that have swarmed.

Best Reading-Time Right Now.

No doubt during the busy summer-time many a bee-keeper finds little time or inclination to read his bee-papers or bee-books. He is then rushed with either bee-work or other employment. So the time to read, for many, is during the long winter evenings and perhaps on stormy days.

Fortunate indeed is he who has saved all his bee-papers as they came during the busy season, for now he can simply revel in them, and lay up a store of apicultural information that will help make greater his success with the bees next season.

And the bee-books! Every bee-keeper should have one or more of the best. In any of the complete books will be found answers to a thousand and one questions that every bee-keeper needs to be familiar with in order to attain the largest success.

It pays to become familiar with the experiences and methods of others in the same line of business. Such knowledge may save much useless effort, and often loss, to the one who reads extensively, and is wise in his selections.

Treatment of Bee-Stings.

Considerable space is taken up with the matter of bee-stings in the Alkaloidal Clinic for November. Not so many remedies are given as may be found in bee-papers, but enough to show that in the medical profession, as well as among the laity, there is a wide diversity of opinion; and possibly those are near the mark who think that no remedy has any efficacy except as a placebo. It appears that in medical text-books salt is given as one remedy for stings, sweet oil as another, also onions. One correspondent advises "to try Apis mellifica, say 3x or even 6x". Dr. W. H. Barnett believes in prophylactic treatment, and says:

"I am satisfied that ecthol, a combination of echinacea and thuja, will prevent the sting of bees from hurting him.

Let him take dram doses every hour for three hours before he commences to work with them. The reason for the faith that is in me is this: They used to hurt me. Last summer I was taking it for a skin disease, and while under its influence I was stung by a wasp on the face and neck. When stung I started to the house to get something to stop the pain and swelling that I expected to suffer with, but instead of pain and swelling as heretofore when stung, there was no more of either than a mosquito or a gnat would have caused."

For the bee-keeper whose time is taken up entirely with bees, working at them as long as he can see in the evening, and going at it again about as soon as he is out of bed, it would not be very convenient to take his dose three hours in advance of work and hourly afterward; although an alarm clock might help out if he had the trick of promptly falling to sleep again. Yet such treatment, if entirely reliable, might be warmly welcomed by some amateurs upon whom the effect of a single sting is severe.

Bee-stings for rheumatism and Bright's disease come in for mention, one man saying: "I do not remember a single person who has kept bees that has been bothered with this troublesome disease". Which merely goes to show that his sphere of observation has been very limited.

The editor is sufficiently up-to-date to say that the poison of the bee is something essentially different from formic acid.

Right in line with the foregoing is the following "scientific note" sent us as a clipping by Dr. Peiro, whom quite a number of our readers know both by reputation and also personally:

"Investigation of the poison of bees has shown M. Phisalix three distinct active principles, one of which produces inflammation and the second causes convulsion, while the third stupefies. The poison is secreted by two glands, the acid one yielding the stupefying and inflammatory substances, and the alkaline one the substance causing convulsions. The observations included the poisoning of a sparrow by the stings of two or three bees. The bird showed weakening within five minutes, then progressive increase of the partial paralysis, which, at last, became a mere trembling, interrupted by periods of somnolence. Death came in two or three hours."

Miscellaneous ✣ News ✣ Items

General Manager France, of Wisconsin, called on us last week when passing through Chicago on his way to New York State, where he will speak on bees and bee-diseases at farmers' institutes and bee-keepers' conventions during much of the time this month. It will be a treat for New York bee-keepers to hear Mr. France.

……

Luna W. Elmore, of Jefferson Co., Iowa, when sending his renewal subscription dollar for 1905, added these appreciative words:

"I can't get along without a good bee-paper like the American Bee Journal. All bee-keepers should read every copy. If one has only one colony of bees, a good bee-paper will help him to give that one colony the proper care."

……

A Six-Foot Swarm.—George Hodges, of Allegany Co., N. Y., sends us the following which originally appeared in the Friendship Register last summer:

Mr. John Todd, who has a large apiary of nearly 150 colonies of bees, reported an unusual sight Tuesday of several colonies of bees that had swarmed and hung to a limb, one swarm after another caught on until the string of bees was nearly six feet long, and so heavy the limb finally broke with them. He said if they could have been photographed it would have made a great picture.

Mr. Hodges then added that he had had the same thing himself many times when the weather was warm.

……

A Queen-Bee Free as a Premium.—We are now booking orders for untested Italian queens to be delivered in May or June. This is the premium offer: To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us one new subscription with $1.00 for the Bee Journal a year. Now is a good time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.

……

"The Fort Snelling Apiary" is the name of the bee-yard shown on the front page this week. It is located on the north shore of the Mississippi River, nearly opposite where the Minnesota River empties into the Mississippi River, and near Fort Snelling. It is a beautiful place, and Mr. and Mrs. Acklin have often entertained their friends at luncheon at this apiary. The honey-house and Mr. Acklin are shown in the picture. This apiary is run mostly for extracted honey. Three nucleus hives are shown, but more nucleus hives, colonies, and a bee-cave are to the right and not shown in the picture.

……

A Bee and Red Clover Calendar for 1905 has been received at this office from Mr. W. F. Marks, of New York, the chairman of the Board of Directors of the National Bee-Keepers' Association. The outside dimensions of the card-board are 6¼x10¼. The illustration, 5x6 inches, shows a large honey-bee and six red clover heads. This latter is pasted near the top of the card, and the calendar below it. At the upper left-hand corner are shown several white embossed bees on a gold background. Altogether it is a very attractive calendar, and should be in every bee-keeper's home. Perhaps Mr. Marks will offer them for sale.

Opinions ✣ of Some Experts

Producing Marketable Comb Honey Without Separators.

20.—*Can marketable sections of honey be satisfactorily produced without separators?*

EUGENE SECOR (Iowa)—No.

ADRIAN GETAZ (Tenn.)—No.

DR. J. P. H. BROWN (Ga.)—Yes.

C. H. DIBBERN (Ill.)—No, no, no.

REV. M. MAHIN (Ind.)—I think not.

J. M. HAMBAUGH (Calif.)—I think not.

G. M. DOOLITTLE (N. Y.)—Not with Doolittle.

MRS. J. M. NULL (Mo.)—No, not as a general rule.

PROF. A. J. COOK (Calif.)—Yes, but not invariably by me.

P. H. ELWOOD (N. Y.)—I should answer *no*, emphatically.

L. STACHELHAUSEN (Tex.)—I do not know, but I do not think they can.

WM. ROHRIG (Ariz.)—As a rule, I should not. I would use separators.

N. E. France (Wis.)—Yes, but not all with a profit. Some will be ill-shaped.

R. L. Taylor (Mich.)—Markets generally now demand honey produced with separators.

S. T. Pettit (Ont.)—Not now. Some of us used to do it, but the standard is higher now.

O. O. Poppleton (Fla.)—Not as a rule. Sometimes one can be successful, but I would not risk it.

C. Davenport (Minn.)—Yes, but with me a good many are bulged, or so uneven that they can not be cased.

C. P. Dadant (Ill.)—Yes, but they are not quite so easily put into shipping-cases. They are usually heavier than the others.

R. C. Aikin (Colo.)—No, except with strong colonies and in *rapid* honey-flows; these come about once in 10 years, and about once in a thousand miles. I say *No!*

E. D. Townsend (Mich.)—Yes. Use 1½-inch spacing, full sheets of comb foundation without bait-sections. I have seen bee-keepers that would better stick to the separators.

E. Whitcomb (Nebr.)—I think not; at least I have never seen any. Sometimes we see them on exhibition at the honey shows, but the judges have a faculty of gently setting them aside.

E. S. Lovesy (Utah)—Hardly, but if the bee-keeper uses full sheets of foundation it will often pass, as it is generally heavier than a full section, but, as a rule, it doesn't give satisfaction.

Dr. C. C. Miller (Ill.)—That depends upon the market. For most markets, and especially for distant markets, separators are a necessity with me. If honey would always come in a flood, they would not be so necessary.

Jas. A. Stone (Ill.)—No. When we were getting honey for display at the Chicago World's Fair, we agreed to take all out of 2300 pounds from one man (who had gotten it without separators) that would crate without the combs rubbing, and he got us only a little over 600 pounds.

James A. Green (Colo.)—Yes. It would have to be a very poor article of honey that was not marketable—at some price. But I do not believe it is profitable to dispense with separators. I do not believe it is possible to produce without separators, in a commercial way, that is, on any large scale, honey that can be satisfactorily packed, shipped and retailed. There is certain to be a great deal more breakage, leakage, and consequent loss and dissatisfaction than with separatored honey. I have met grocers who declared they would never handle any more honey because of their experience with unseparatored honey, and I am sure that if I were a consumer the average unseparatored article would tend to discourage my use of honey.

G. W. Demaree (Ky.)—It depends upon your market for honey in the comb. In my locality so many people prefer their comb honey packed in buckets and jars, and covered with honey in the extracted form, that it is no trouble to sell all the "out of shape" sections produced without separators, and at a better profit than is realized from the fancy pick. When the impractical fancyites quit writing about "chunk honey" to discourage the introduction of really fancy-packed comb honey, the way will be opened for better profits, at least in a small way in apiary work. Several years ago I shipped to Louisville, Ky., from 100 to 200 buckets of comb honey cut from the section boxes and packed in the buckets (4 to 8 quart buckets) in an upright position, and covered with extracted honey, and the profit exceeded that of my fancy crated sections.

Honey as a Health-Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food", written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey". It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey the more honey they will buy.

Prices, prepaid—Sample copy for a two-cent stamp; 50 copies for 70 cts.; 100 for $1.25: 250 for $2.25; 500 for $4.00; or 1000 for $7.50. Your business card printed *free* at the bottom of the front page on all orders for 100 or more copies. Send all orders to the office of the American Bee Journal.

Contributed Special Articles

No. 1.—What is the Best Bee-Hive?

BY ALLEN LATHAM.

CLIMATE, local conditions, purpose, and individual taste have all combined to bring into use a great variety of hives, and few of these hives are without their stanch supporters—supporters so stanch that only the most cogent argument backed up by the strongest of confirmatory facts will persuade them to desert their hive for some other of different style. It is possible, but not likely, that they are using the hive best suited to their needs, and however much a bee-keeper believes in his own hive, he should be ready to listen to arguments in favor of, other hives, and even ready to try for himself the principles of these new hives, so that, should he find them superior to those of his own hives, he can with the least possible delay substitute the better for the inferior.

I used for 17 years a hive with free hanging frames made according to descriptions found in an old edition of Father Langstroth's book. I liked the hive and still use a few, but as I learned more and more of the needs of bees in this climate, I saw more and more weaknesses in this hive. For some three years I studied and planned a hive which I only waited an opportunity to construct and make trial of. My business was so pressing, however, that it was only three years ago that I finally made a hive which involved as many of the desirable points as I could work into it.

That year I had occasion to travel about a great deal, and I was greatly impressed by the vast extent of unoccupied bee-territory. If only I could get small apiaries established here and there to gather the honey which was yearly running to waste, I might add to my income in a most satisfactory way.

But to keep two or three hundred colonies of bees widely scattered in ordinary hives would call for such an expenditure of time and energy that the project would surely fail; and my whole attention was therefore turned to the making of a hive which would run itself eleven and nine-tenths months of the year, and which would require no care beyond the keeping up of the quality of the bees and the removal of the honey. A hive that would be cool in summer but warm in winter; a hive which would have a right entrance the whole year through; a hive which would keep out mice and other intruders; a hive which would be proof against rain, wind and all other elements—one, in fact, which was practically automatic.

Such a hive must be large, and yet small.

I finally built four hives which apparently solved the problem, for they were sufficiently successful to warrant my making 28 more, and their continued success is such that I hope to make many more this winter.

The hives were made double-walled with air-space lined on both sides with many thicknesses of newspaper, and the outside was covered with Paroid roofing-paper. The cover was made to telescope over the whole, and was arranged to nail or screw on. The bottom was made fast and also double. The frames, 20 in number, and measuring 14 by 11 inches inside measure, were closed ends and closed tops, and were hung crosswise of the hive. The inner bottom of the hive sloped from the back to the front, so that there was a space about an inch deep under the front frame, and only a bee-space under the backmost frame. A wedge-shaped strip of wood was nailed on the bottom thick end to the front to serve as a ladder for the bees under the middle of the frames, while either side-wall also furnished easy access to the frames. The entrance was made the full width of the hive and of varying depth. I now make the entrance ⅞ of an inch deep and run through it a row of wire nails ⅜ of an inch apart to keep out mice in winter.

The hive has other kinks which I will not take the space here to describe, as I have pointed out its salient features.

Such a system of bee-keeping would not admit of the use of sections, nor would it lend itself readily to the production of extracted honey, and the production of chunk-honey seemed in every way to meet best the needs of the case. The long hive was adopted rather than the tall for two reasons—it would make a better winterer, and was more stable.

The success of these hives has led me to construct a hive for use in the home yard which should have the essential features of the large hive described above, and yet be arranged for the production of section honey in the regular way. I now have 20 such hives and like them very much. These hives have closed-end frames hung crosswise; are extremely warm and well ventilated; are cheap, made as they are from boxes procured at the grocery; are so constructed as to avoid the objections which many have for frames hung crosswise.

Much of what I have said thus far is largely introductory to that which is to follow. Such an introduction is unpardonably long, but without it I should find it difficult to make clear all I wish to say. The purpose of writing these articles is to exploit the closed-end frame and the crosswise frame; for these two features combined furnish a subject well worth the most careful attention of every man or woman who keeps bees.

On pages 213, 292 and 468 (1904) will be found queries and answers relating to this subject. If you are interested in this present article you will be repaid if you refer to the pages named. You can gather from page 213 that the objection that most bee-keepers have to a closed-end frame is that it lacks ease of manipulation, and that such is true few if any will question. Why, then, have anything but a free-hanging frame? Simply because the ease of manipulation is a minor factor with most bee-keepers. Truly, I believe that the majority of bee-keepers would be better off if their frames offered many difficulties in manipulation, for I know that much harm is done by needless handling of the frames. The best bee-keeper is he who can get fine results from a colony and not have to loosen a frame from its place for months at a time.

That queen-rearing calls for much manipulation renders the closed-end frame unfit for that branch of bee-keeping; and it is doubtful if the closed-end has sufficient advantages to offset its awkward features in the production of extracted honey; but for the production of comb honey its advantages far out-weigh any objections that can be raised.

That the closed-end frame causes the death of bees in rapid handling is true, but what of the lives of thousands of bees that it saves? And right here let me say that it will not cause the death of any more bees than will the wide bottom-bars which some of our sages are advocating.

The great advantage of the closed-end frame is its power to conserve heat, for it not only makes the brood-nest more snug and free from so much intercommunication of currents of air, but it furnishes an air-space on two walls of the hive. Space which was worse than useless before is converted by this style of frame into actual and valuable use. It is obvious now if it has not been before that the closed-end frame which I speak of is closed to the very bottom.

Frames well made, with smooth and square edges, pressed close together, are not hard to get apart, and after one is used to the handling of them he will find that for all the ordinary needs they are as easy to manipulate as free-hanging frames.

There are other advantages besides that of heat-saving. These frames are right where you want them all the time. If a hive gets knocked over by roving beast or mischievous boy little harm is done, and when it comes to moving hives about a man blesses such a frame.

Many bee-keepers call for a self-spaced frame, and find in the Hoffman what they believe meets their needs. Why any one will use a Hoffman frame is beyond my understanding, for it has practically all the disadvantages of the closed-end frame with only one and a half of the advantages. It keeps frames in place, and it shuts out half of the too-much circulation of cold air. Why in the name of common sense not carry the full width of the end-bar clear to the bottom and get all the advantages?

New London Co., Conn.

(Continued next week.)

“Shook Swarming” and “Red Clover” Queens.

BY C. P. DADANT.

Having about as many colonies as I can well keep in town (provided they all winter), I am planing to start an out-apiary next season, and I was thinking that it might be a good plan to practice “shook swarming”, and at the same time secure a supply of long-tongued (red clover) queens, introduce them among the brood and nurses left queenless, thus saving them the two or three weeks' time before they could rear a laying queen of their own. If there are any vital objections, please give me the benefit of your experience. Also, whether you would advise me to invest in so many long-tongued queens—say 15 to 25—or would it be safer to get only a few, and the balance Italians?—G. A. H., Pittsfield, Ill.

Replying to the above query, which reached me a few days ago, I will say to begin with, that I am very much in favor of the method called “shook swarming” by our modern bee-keepers. There is nothing new in any of the manners by which this is done, but the name, although perhaps appropriate, has not “took” my fancy to any extent.

The manner of procedure which I prefer because it is the safest, is to make one “swarm” out of two colonies. I have always been in favor of safe methods, and very much admire an old Italian proverb:—

Chi va piano va sano,
Chi va sano va lontano.

“Whoever goes slowly, goes safely; whoever goes safely goes a long time.”

The swarm is shaken from a colony into a new hive, including the queen and one comb of brood which is given at the same time. The swarm is left on the parent colony's stand, and the parent colony itself is moved in the place of another strong colony, which is in turn removed to a new spot. If a queen is at once given to the colony from which the old queen has been taken, there will not be much danger of swarming, but in case the bees are noticed building queen-cells a new swarm may be made from the same hive in a few days, and before a natural swarm has had time to issue.

Now as to red clover queens. I have seen very much in the papers about these, and have heard them praised, but I am very skeptical about any one having secured any very positive and lasting traits in a race of bees in the short time that we have had the Italian bee with us. I know of traits which may be fixed quite readily, such as color, but the length of tongue has varied very much. From the very beginning of the importations (and our old bee-keepers will remember that we were once the most active importers), bees have been found that could get honey from red clover; yet, however much I tried I never could secure a positive advantage; that is, secure bees that would show regularly.

There is a time when no bees can work on red clover and I have also seen times when even the little common bees worked on its blossoms. I believe that the length of corolla of the clover bloom depends upon climatic conditions, and that there are seasons when all the bees are able to reach the honey in its bloom.

When we first imported bees we had an old friend living near us who was very much interested in this matter. He was the first to notice that the Italians worked on red clover. But one day he came to me and said the common bees had noticed the others working on the clover and were trying it, too, but could not succeed. I followed him to the field and saw both blacks and Italians at work, and for all the willingness I had to see the thing as he did, I could not help concluding that they were all working alike, and that neither the Italians nor the blacks were making much headway, although they seemed quite busy. This was some 30 years ago, and although we have had some of the so-called red clover queens, I have yet to see a single barrel—even a single 10-pound can—of red clover honey put upon the market. I was once shown a case of very nice honey by a bee-keeper who claimed it was from red clover, but a test of this honey disclosed the fact that it was strongly flavored with basswood, and I concluded that the man was deceiving himself in thinking that he had succeeded in producing red-clover honey.

Yet, we must not discourage the steps that are taken towards red clover bees, for it is a step in the right direction; but I do not think I would rely on the possibilities of stock from any one apiary. On the contrary, if I desired to buy bees I think I should order from two or three different reliable breeders, taking care to secure good, prolific bees without paying much attention to the yellow color, for too many are putting color as the first requisite.

There is no doubt that queens, reared in the South and brought up to our Northern States at the time of swarming, will save much time to the colonies that are divided by shaking or otherwise, and at the present prices it pays better for a honey-producer to buy his queens from the South than to rear them in our northern climate.

Hancock Co., Ill.

Our Sister Bee-Keepers

Conducted by Emma M. Wilson, Marengo, Ill.

"Lebkuchen" or Spice-Cake.

It's German, and called by the Germans "Lebkuchen", taken from Praktischer Wegweiser. Boil a quart of honey in water to which has been added the rind of a lemon. When cooled to milkwarm, add a quart of rye flour and one of wheat flour, besides two ounces of cinnamon and cloves, then a handful of preserved orange-peel cut fine, a heaping tablespoonful of soda, the whole thoroughly mixed.

Knead this dough well upon the board, roll out as thick as the little finger, cut into cakes, glaze with white of egg, put almond meats on top, and bake in tins in a tolerably hot oven. While still hot glaze with powdered sugar stirred thick into water, which immediately dries into a glass-white glazing.

These cakes keep well in tin cans, and are excellent.

Preventing Second Swarms.

I had one colony of bees in the spring of 1904 that had wintered, and had two swarms in the summer, with 18 pounds of honey. (Mrs.) M. E. Barbour.

Barron Co., Wis., Dec. 19.

You would probably have had more honey if you had allowed the colony to swarm only once. Of course, it is all right to allow a second swarm if it is increase you desire, but if honey, then one swarm is enough.

To prevent a second swarm, remove the parent colony to a new location when the first swarm issues, and place the swarm on the old stand. That will prevent further swarming, for all the field-workers for the next day or two will go to the swarm, thus reducing the old colony so that it will have no desire to swarm again.

Car of Candied Honey in Paper Packages.

I inclose a clipping from the Portland Oregonian, containing a statement in regard to a shipment of candied honey which is prepared in a new form. I have an idea that this form of honey is not pure. I would like to have your opinion on the matter. If this honey is not pure it is probably made cheap, and would injure our honey market in Portland. Please answer through the American Bee Journal.

We had a very favorable season for honey the past season. We have 85 colonies of black bees. Our honey amounted to 7000 pounds, besides the winter supply, and the largest part of it was No. 1 white clover honey.

Cowlitz Co., Wash., Dec. 22. Mrs. L. Schmitt.

The clipping sent by Mrs. Schmitt reads as follows:

CARLOAD OF CANDIED HONEY.

What's sweeter than honey? W. H. Pennington, of Malheur Co., Oreg., thinks it is his candied extracted honey, 25,000 pounds of which has just reached this city under the direction of Woodward, Clarke & Co. People are accustomed to buy honey in jars and tins, and, although the article is sweet enough, it sticks and leaves one's fingers sticky. Mr. Pennington's candied extracted honey is sold in solid blocks in packages weighing 2, 3½, 5 and 10 pounds. It is unlike the yellow, sticky honey made by bees. Pennington's honey is a solid block that can be cut with a knife, and served like butter or cheese. It's newly on the market, and is Mr. Pennington's invention. No jar is required to hold it, for it is sold in bags made of paraffin paper, and is easily handled. It is extracted from the comb in the usual way and left to dry in the cool, frosty, dry air of eastern Oregon. Chemists pronounce Pennington's honey to be absolutely pure.

It is highly probable that the honey mentioned is all right, and just as probable that the editor of the Oregonian is not as well informed about matters apicultural as he might be. No wonder any one, from reading what the editor says, would be likely to imagine that something else than pure honey was under consideration. "It is unlike the yellow, sticky honey made by bees"—that sounds as if it were something *not* made by bees; and being Mr. Pennington's "invention", it would be something of his compounding. But farther on he says, "It is extracted from the comb in the usual way"; and that settles the matter as to its source, for it would hardly be possible that Mr. Pennington would put an artificial affair into combs merely for the sake of throwing it out again.

Moreover, Mr. W. H. Pennington is the owner of 500 colonies of bees, from which this year's crop was 34,000 pounds, a large part of which has evidently been put on the market in Aikin paper-bags. That honey is all right, and very likely so is the Oregonian editor—when not talking about honey.

Grows More Interesting.

Mrs. L. Mack, of St. Joseph Co., Mich., writes: "I think the American Bee Journal grows more interesting every week".

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

PLAIN SECTIONS VS. SLOTTED OR BEE-WAY.

This time the experts get at the plain sections. As many as 11 out of 25 have the cheek to confess that they have never tried them. With favor 9 regard them, and 7 with disfavor. Only about 3 out of the 9 show anything more than a languid sort of favor; and only 4 of the opposing 7 oppose with vigor. On the whole, it doesn't look much as though an overwhelming boom for the plain section was sweeping the country. Repeatedly said that the *main* advantage is in getting more sections into the same sized box when packing. Then I should reply: "Great cry, and limited quantity of wool". The opposing arguments seem more important to me. When snugly packed in a case there is serious difficulty in getting hold of one to get it out. As all spaces in the packing case are less, some sections will have to be left out for slight protuberances which would safely go in with the other style of fixtures. Stachelhausen's experience is that it takes chin exercise to make the prospective buyer believe that they are as large as insetted sections which are really no bigger—look smaller than they are, to their owner's inconvenience. Page 790.

SAINFOIN HONEY.

Our hope of honey from sainfoin in this country is not, according to Mr. C. P. Dadant, very good. Plant itself a failure, for one thing—all except the try, try again. Even in Europe much the greater proportion of territory, if I get the idea correctly, yields scant nectar or none. Just one small province of the numerous provinces of France is greatly noted for its sainfoin honey. Page 790.

QUEER BEE-ANTICS AND STAR-GAZING.

That's a worthy observation on page 791, the worker that cuffed the queen after being three times refused in offers of food—and got cuffed in return and went away. A Chinaman in similar circumstances would not cuff Tsi Ann. Bees seem to have got a pretty good blend of the spirit of royalty with the spirit of democracy.

And Robert West will be making us all want to go to Jamaica and see four times as many stars, and all of them four times as big. Reminds one of the Irishman. Days were longer in Ireland, and indade there were more of them! *Some* reality about the stars. From here we can see Sirius, which is No. 1, but not Canopus, which is No. 2. Also the northern circumpolar has several striking groups, but not even one first magnitude star. The southern circumpolar is just the opposite, few striking groups, but six stars of the first magnitude. One of them that I should take an early opportunity to gaze at is Bungula, much more frequently called Alpha Centauri, which is our nearest neighbor among the stars. The *immediate* circumpolar is strikingly bare of stars, even more so than the northern one would be were Polaris blotted out—nothing bigger than fifth magnitude for 12 degrees radius.

BULK COMB HONEY MARKET.

Market for bulk comb in danger of being overstocked. One would think so if they are all going at it. Decided limits to the market—and market partly founded on the miserable untruth that sections are fabricated. Customers too enlightened to take any stock in the cry of manufactured comb, and in the habit of buying sections, are not likely to join in a stampede back to chunk honey. Page 792.

PRICKLY PEARS AS BEE-FEED.

Who'd a-thought it? Who knew prickly pears were plenty enough anywhere to use as bee-feed? D. C. Milam is one of the pathfinders whose path few people are likely to follow. Page 792.

"STRAINED" HONEY AND GIRLISH BEAUTY.

It's a villainous reminder of dark ages—still, with us—that 'most everybody persists so in saying "strained honey". And, Sister Wilson, when we copy recipes that have the vicious phrase in, let's quietly change it and say nothing—as might have been done on page 793. No, I'll take that back. To make a nice girl more beautiful than she already is requires such "pauwerful" influences that it's to be supposed that it won't do to trust commercial extracted honey. Crush a good section and pass it through gauze and have some real strained honey.

SUGAR NOT GOOD FOR REARING QUEENS.

"I feed honey—sugar is not fit to rear queen-bees on." This gospel, according to Darrow, sounds to me like good, sound gospel, albeit I am not a safe authority, not being a queen-breeder. Perhaps something would depend upon the condition of the pollen-supply. Sugar syrup *very* inadequate when pollen is scarce, but almost tolerable when abundance of pollen is coming in every day. Page 796.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. MILLER, Marengo, Ill.

Correspondence School in Bee-Keeping.

What do you think of correspondence schools in bee-keeping? Do you think bee-keeping can be learned as quickly in that way as when working with an experienced bee-keeper? ILLINOIS.

ANSWER.—No amount of correspondence can equal in value direct instruction at actual work in the apiary from the same teacher; but for one who can not have this advantage it ought to be worth much to have the privilege of information upon any desired points through the mail; and I suppose something of this kind is meant by a correspondence school in bee-keeping.

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Queenless Colony in the Cellar—Using Unfinished Sections.

1. I put 10 colonies of bees into the cellar Nov. 10, all in fine condition with plenty of stores and bees. Dec. 22 in looking them over I found a hive in which I could see no bees, so I opened it and found about 150 dead bees and no live ones. All of the combs were in good condition, with no sign of any disease, that I could see. On the center of the middle comb there was a moldy spot about the size of a half dollar, on which there were about 50 dead bees. There was about 35 pounds of honey in the 8 frames. (I use the 8-frame hive.)

Out of 11 colonies this one did the best last season, and was a large colony when I put it into the cellar. What became of the bees? My bee-cellar is a small room off from the main cellar. The temperature is from 40 to 45 degrees. Have been troubled with mice to some extent, but there are no traces of them in this hive I speak of.

2. Would it be all right to put sections that are from ¼ to ⅔ full of honey, partially capped and somewhat candied, in the supers, then put them on the hives next summer? Would the bees eat it out, or would they fill up the sections and cap them over? CONN.

ANSWERS.—1. If the colony was strong when put into the cellar, I can not imagine any way by which in 6 weeks' time the bees should disappear entirely, unless they should move out in a body and go into another hive, which is very unlikely. It is rather more likely that although the hive was heavy when put into the cellar, it did not contain such a very large number of bees, the colony having become queenless some time before. In that case the bees that were left would be old, and what were left might come out of their hives and die on the ground during the 6 weeks.

2. It will not be well to put them in supers to put on the hives. If very short of stores, the bees might empty out the candied honey if given early enough, but the probability is that a good deal of it would be left in the sections, and the bees would fill up the empty space and seal over. Yet if you like candied honey for your own table, as some do, it will work all right. If you don't want any candied honey in the sections, you can melt them up, taking care not to overheat, taking off the cake of wax when cold.

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Putting Bees in the Cellar—Sainfoin and Sweet Clover Seed.

1. I have 11 colonies of bees that I wish to move 10½ miles. When I bring them home can I put them into the cellar at once, or would I better let them stay out-of-doors and have a flight before putting them in?

2. Where can I find sainfoin seed? I want to try it in this locality.

3. Can I get sweet clover seed in Chicago? I see in the American Bee Journal that a man in Kansas City advertises it, but that is quite a distance for me to send for it. INDIANA.

ANSWERS.—1. Better put them in at once unless you are pretty sure they'll have a flight in 2 or 3 weeks.
2. From any leading seed dealer.
3. Yes, it is always to be had in Chicago, and generally in any large place.

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Disturbing Bees in Winter.

I opened a hive last Saturday in the upper part of which was 6 pounds of honey in one-pound sections. This I took out. All the other sections were empty. In the lower part of the hive were 10 frames all full of fine honey, about 50 pounds. My friend said that I could take some or all of it out and feed the bees with sugar. I tried to take 3 frames out, but they broke, so I left all of it in. I think this did a great deal of harm to the bees. What can I do? The weather is very cold now, and the bees can't fly out. NEW JERSEY.

ANSWER.—It is a pity you made such a mistake as to attempt to take anything from the bees so late as the first week in December with the idea of replacing it with sugar syrup. It's a doubtful step to do that sort of thing at any time, and if done at all should be as early as September. Very likely there isn't anything to be done now. It is possible that the bees are all right on the broken combs just as they are. If, however, you want to do something for them, you might peep in, and if the combs have fallen so as to be packed together, you might raise them on edge, if necessary putting little sticks between them so as to keep them apart about half an inch.

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Wintering Bees in a Repository.

I bought 75 colonies of bees last fall in Langstroth hives, from the widow of a bee-keeper who died last March. I leased the ground and bee-house. Yesterday I began putting them in at 10:30 a.m. and finished at 1:30 p.m. I expected to set them like Boardman's picture in A B C, but it was too warm to remove the bottom-boards, so I sat them one above another. And then the cleats on the corners were uneven, so they would not set level side by side. They have only a ⅜x14 entrance, and I fear it will get clogged with bees. This is my first experience with a winter repository.

Can I go into the bee-house soon with a dim light, pry up the bodies and place inch blocks under the front corners? They are 4 hives deep, and weigh 80 pounds. Or would you depend upon going say Jan. 15, February and March, and cleaning out the dead bees with an iron rod? Half of them have a 1½-inch hole in the covers. Their former owner wintered them for 30 years just as I have them fixed. MISSOURI.

ANSWER.—If for 30 years they have been wintered just as they are, and if that wintering has been entirely successful, it would seem a pretty safe thing to continue without change. Yet, on general principles, I should fear that a ⅜ entrance would get clogged. Little danger just at first, the trouble becoming constantly worse as winter advances. So it is probably advisable to increase the ventilation as early as some time in January. If you go about it quietly there ought not to be much trouble. A dark lantern, a bicycle lamp, or a common lamp having a paper over the chimney with a hole cut in one side will be good. It's a question which will be best, to pry up the hives just as they stand or to re-pile them, loosening up each one as you pile. If they get too much stirred up, you can wait for them to settle down. Even if it should take you a day or two, you'll sleep enough better afterward to feel that there's little danger of their smothering with clogged entrances.

See Langstroth Book Offer on another page of this copy of the American Bee Journal.

Convention Proceedings

THE ST. LOUIS CONVENTION.

Report of the 35th Annual Convention, of the National Bee-Keepers' Association Held at St. Louis, Mo., Sept. 27-30, 1904.

Continued from page 10.]

The President called on Prof. Louis H. Scholl, of Texas, to address the convention on

SOMETHING ABOUT TEXAS BEE-KEEPING.

Prof. Scholl—I have not had time to get up a paper as I should have done, and, therefore, I have only taken a few notes which I generally put down in this little book. I shall say a few words about Texas, although I do not know whether it will be as a paper would have been. The trouble is I don't know what you all want to know about Texas. We have a State down there, a big old piece of land, and have some bee-keepers in there, and some of them are a pretty good size, not only in the number of colonies, but they grow big, too.

Now, most of you know something about the statistics of Texas in the way of the production of honey. In the last census, gotten out in 1899, we have nothing to show exactly what we have down there, but I have been working on it in the way of getting statistics for our department, and have obtained some figures that are considerably larger than the census reports got out. In getting these statistics I am trying to get a complete name list of the bee-keepers in the State, and in that way I have them report to me the number of colonies they have, the amount of honey produced, and other things, and thus I have gotten at some figures. I may say that we have over 400,000 colonies of bees in the State, and the amount of honey produced by these is only about 5,000,000 pounds, that is, the average per colony is only about twelve pounds, due to the fact that we have so many little one-horse bee-keepers and box-hive keepers, although we have some of the very best you can find anywhere, and some of them with large apiaries and producing lots of honey. Now, figuring on these colonies at that low average we have an output of more honey than any other state, and we claim that Texas is in the lead in the output of its honey product. If that is the case with such a low average, where would Texas be with the average raise, which can be done because we have the country down there. If we improve our bees and everything we can have an output away beyond what we have now, and in that case Texas would simply be away ahead.

Now somebody may be interested in the way I would divide Texas as a honey State: Beginning with North Texas, north of Fort Worth, where we have very few bees, it is a plain, and nothing but cattle there, and very little bee-forage.

In East Texas, where we have our pine forests and oil and rice lands, we have along the low places and rivers a good deal of basswood, quite an abundance of it, and of holly, and these yield a large amount of honey, but the trouble there is the country is not settled up yet and there are very few apiaries located there. Those that are located produce a whole lot of honey, but the great abundance of the honey is of poorer quality.

Take Central Texas, that is the great cotton-belt; there we produce cotton-honey mostly, and there is where we have more of the horse-mint, but of late years on account of the drouth the horse-mint has become scarce, and on account of the boll-weevil, which is one of our greatest evils down there, the cotton crop has been cut short.

Take West Texas, it is a somewhat mountainous portion and there are only some localities that produce honey properly, and sumach is the only honey-plant worthy of mention.

Then South Texas, below Houston, is a low, swampy plain, and rice and things like that are produced more than anything else, and along the rivers and the lagoons and lakes we have the rattan-vine which yields a lot of honey, but it is of poorer quality. It is shipped to the Northern market for manufacturing purposes.

When we go to Southwest Texas we go to a country that I do not think can be surpassed anywhere. We have there almost an unlimited amount of bee-pasture; we have the mesquite tree, the wahea, the cat-claw and many other things; even the prickly pear, with which some of the prairies are just covered, helps us out a good deal in some years.

I have been asked a great many questions about locations in Texas for bee-keepers. I might say that we have many locations in Southwest Texas where bee-keeping could be carried on and large amounts of honey gathered, but most of these are away from the railroads and most of the land is sandy land, and a person would simply have to go out and camp and "bach" out in the woods, and haul his product to the railroad stations about 40 or 50 miles, and run things at long distances. Southwest Texas is not a very good farming country. It is only of use as a cattle country and for bee-keeping. They both go well there. As the railroads are opening up the land, bee-keeping will progress and open up new localities, and the time will come when Southwest Texas, if properly stocked up with bees, will be the greatest bee-country I know of or have any idea of.

I would like to say a few words about agriculture at the Texas A. and M. college. I have had the position as apiarist at the Station and have charge of the agricultural work of the State, and I believe that great good could be done by having such work carried on by the Experiment Station. I would like this so that other States might take up the work as they surely should do. I think much good could be done if they could do so. We have at College Station an apiary of 40 colonies, and a bee-house and all the equipments necessary, besides a good deal of other equipment which is mainly kept there for show and for the use of students, to get them acquainted with the different materials used, and I think we have the best equipped station or experimental apiary anywhere in the world; at least it has been pronounced so by everybody that has seen it or knows anything about it. It was established in 1902, when we received an appropriation from the State Legislature of $750 to start with; that was for two years; for the next two years, 1904-5, we have received $900 more, and with this money we have been enabled to establish this apiary and all the equipment, and we have received from the college ten acres of land for the location, with a ravine running through it, all of which makes an ideal location for an apiary. We have put up a bee-house which has been planned and built so that later on it will be used as a plan to be given out to the bee-keepers so that they can copy after it, and build ideal bee-houses for their own use.

We have in this enclosure about four acres of land in two fields put into cultivation for the testing of honey-plants, and we have planted a good many different honey-plants that have been written about, and that we have run across, to see as to their value and whether it will pay or be profitable to plant trees. We have tried as many as forty different kinds for the last two years—forty-one different kinds this year—and we have found only a very few adapted to the conditions of Texas that will be profitable to plant for honey; these at the same time are planted for forage. Besides, many of the experiments that we have carried on show that it would not pay to raise any of these others for honey alone. Further experiments will be carried on along these lines. We have been looking around also for honey-plants or shrubs from further west, from the more arid regions, with the view of planting these in localities where the natural honey-flow is scarce. If we could propagate plants from other localities, in other words, put up an artificial yield of honey, it would increase apiculture and we could have honey-producing localities where no honey is produced now. This will take a good deal of work and time.

In the apiary we have several different races of bees which are tried for different experiments. As we get their results they will be published later.

In the way of experiments we have a good many on our list. As time goes on it becomes more apparent that some of these experiments must be carried out by people who have some say so, who have some authority, so that after the experiments are made we have something to go by. For instance, when we went through this glucose and sugar feeding mist that comes up every once in a while, if we had some authority on this subject, someone that could tell us just exactly all about it, it would help us out a whole lot. Some of these things are exactly what we are going to do down at the Station. Last night I took some notes on these very things, and we are going to try those. It takes time and money to carry out accurate experiments of this kind. I should say that work of this kind should be carried out at every State station, and if the bee-keepers only will, they can have such work done. It was brought about by our bee-keepers down in Texas. We had our first meeting at College Station in 1901. While down there we made a request for an apiary at the college, and an apiarist, where such work could be carried on. I am glad to say it suceeded, although it took lots of hard work. We secured only a very small appropriation, $750, but it gave us a start, and now we enjoy having the best equipped experimental apiary anywhere, and are going to try to keep ahead of any that ever comes up.

One of the experiments we have under way is the manufacture of honey-vinegar. In large apiaries there is always a waste of honey, and if we could manufacture that into honey-vinegar, and work up a market for it, and sell it, we could save a whole lot of money for the bee-keepers. Then we have a lot of cheap-grade honey that should not be put on the market, and which, if put on, lowers the price of good honey. We are trying to find out if this cannot be made into honey-vinegar to more profit, and thus save the price of the better-grade honey.

Another experiment we are going to start is along the wax and foundation line. We are going to try to find out the amount of honey consumed to produce wax. While it would not perhaps be profitable to convert the cheap honey into wax, perhaps we could take this cheap honey and have the bees convert it into wax and put it on the market in the shape of wax instead of offering them the lower grades of honey at a cheaper price, thus lowering the price of the better grade. We are also experimenting along the line of rendering the wax of old combs, and along the line of such hives and accessories and other things. At almost every convention I attended last year, something like 14, the question came up as to the best hive, and similar questions; there also comes up the question as to the difference between the regular Langstroth and some others, and the divisible brood-chamber hive. Some of those things will never be settled unless they are taken up by some scientific worker, or somebody who will take accurate note of these things. If a bee-keeper has a hobby of his own he will bring up something, and he will claim his way is the best, and always have a hive of his own that he carries about with him. This is not the case with somebody that has this work in charge somewhere else. He wants to get down to the facts of the case; he does not care what the results will be; what he is after is to get at the fact, and prove it, and he will carry on the work until he is through with it, and then come back and go over it, and then when he gets through he has his results noted, and they are to the point. This cannot be done by the bee-keeper, for a good many reasons; he hasn't the time, and he has hives of his own, and he is not accurate enough. He cannot because he has too many other things calling for his attention. All these things should be taken up by the Station.

Honey-bottling is another one of our problems down there, in other words, putting up honey and preventing it from crystallization. It is quite an important problem, and I don't know yet what we are going to do with it. The majority of consumers prefer honey in a liquid state. We have some honeys there that granulate in a few weeks after being taken from the hive. Before we can put that on the market we have to reliquefy it, and maybe it will candy again. Sometimes we have honey on the road and it is delayed, and when it reaches the consumer it is candied, and he does not want "sugar-honey," and it is returned to the bee-keeper. If we could find a way of putting up this honey; especially of putting it up in a fancy way, as some people put it up, and keeping it from granulating, it will be worth a whole lot.

Besides this there are a great many other problems. The work of managing outyards at long distances with the least amount of labor and attention, and trying to make the biggest amount of money out of our product. We have another apiary at one of the sub-stations and we have made arrangements for co-operative work. Texas is so large, and has such varied conditions, that we have to carry on our work in different sections, which makes it harder for the apiarists at the station. The coming year we will take up work along more scientific lines. We have made a card catalog of almost all of the scientific work that has been done, most of it taken from experiment station records. We did this so that we could see what had been done along these lines before we went ahead. We want to prevent all the repetitions possible.

At the College we have given instruction to the students in apiculture. The College has not been able to put on apiculture as a regular course because the time is taken up by other studies. They have made an elective study of it for senior class students, for the whole State; in this way we have had some State students, but during the spring-time of the College we have a short course in apiculture, and in this way we had 18 short-course students last year who took apiculture, and it prepared them pretty well for the work after they left the College. Besides this, we have students working in apiaries during the season who work under the Student Labor Fund, and in that way they get a good deal of information.

There are many questions that come up that should be taken up by experiment station people. I think an experimental apiary ought to be established at each of the experiment stations of the different States, especially those in which apiculture is carried on to any great extent, and this can be done by bee-keepers if they only go after it. We did it down there, and I think it can be done in other States. LOUIS H. SCHOLL.

The President called upon Mr. Moe, the representative from Cuba, who was escorted to the platform by Mr. Hyde, after which the President introduced him to the convention.

BEE-KEEPING IN CUBA.

Mr. Moe—I did not come here with the idea of making a speech, and you will have to excuse me along any such lines. I came here to get what information I could along those lines of bee-keeping that interest me. You are aware, of course, that the conditions with us are very different from what they are with you in many respects. Your bee-keepers probably have different methods, so do we, and it possibly would not be practicable or wise to tell you all about our methods because you could not take them back home and apply them. I do not read your articles on winter bee-keeping, because they are of no value to me, and possibly for me to go on and tell you about what we do would be of no value to you. What interests me most is how I can produce the most honey, rear the best queens, and sell my honey to the best advantage. The question of wax cuts some figure with us. We can produce that perhaps better than you can. When I commenced bee-keeping there I wanted to do it perfectly, acording to what you call the right method. I have got into it this far that I am cutting the corners off and going across lots; I am not doing all the fancy wiring and full-sheet foundation work; I found it didn't pay; we get so little flow of honey we have to produce it. I think if you give the matter study and thought you will find that it is all in the location. That is all I have to say, Mr. President.

(Continued next week.)

Some Facts About Honey and Bees.—This is the subject of an article written by Mr. J. E. Johnson, and published on pages 581–82 of the American Bee Journal for Aug. 25, 1904. We have republished it in 4-page leaflet form for general distribution, and furnish it, postpaid, at 35 cents per 100 copies. Send all orders to the office of the American Bee Journal.

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Reports and Experiences

Good Honey Crop.

The honey crop was fairly good last season. We had 17 colonies, spring count, and 1100 pounds of nice, salable section honey; no white clover honey. Bees went into winter quarters well supplied with honey.

R. A. MARSHALL.
Wright Co., Iowa, Dec. 28.

Bees All Right So Far.

Bees in New England are all right so far this winter. New Year's day offered a fine opportunity for a thorough flight. The thermometer registered 46 in the shade; there was little wind, and the sky was clear the whole day long. There should be no occasion for severe loss from long winter confinement this year. My own bees seem to be in excellent condition.

ALLEN LATHAM.
New London Co., Conn., Jan. 4.

Problem of Wintering Bees.

The article by Allen Latham, page 855 (1904), on wintering bees, is a very good one, but I think he left out one very essential part—that of an upward passage. Very likely he has a bee-space above the frames, but many do not have. I have kept bees over 25 years and can not remember losing one colony in wintering. But I have always read several good bee-papers.

I think over one-half of the loss of bees last winter was because the bees

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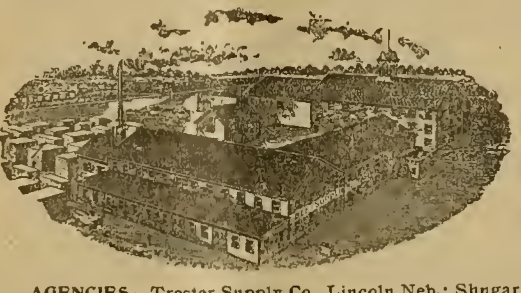

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GUS DITTMER, Augusta, Wis.

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could not get to the honey. Either they were not wrapped and packed properly or there was no upward passage. I positively do not believe it can be so cold they can not move to the honey as fast as eaten, if everything else is all right. IRVING LONG.
Linn Co., Mo.

Light Yield of Honey.

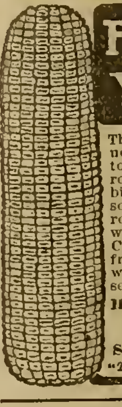
The honey harvest the past season was light, taking the county through. From 27 colonies, spring count, I harvested 900 pounds of white comb honey. We got no fall honey in this county, but bees filled the hives quite well for winter. I have just got my bees into the cellar for winter. I increased to 43 colonies, which are in fair condition. JOHN CLINE.
Lafayette Co., Wis., Dec. 10.

Marketing Honey—Wintering Bees—Sections.

This has not been as good a honey year as last. White clover yielded very little as it winter-killed last winter badly, and I think the young clover did not produce much. Still I got 2,540 pounds or about 60 pounds spring count, some of it nice basswood. I sell my honey all at home, going over the town of about 3,000 inhabitants about 3 or 4 times every fall, and I find that people will buy who never call for honey at the stores. When they see it they want it, or at least the children do. My wife sells what she can from the house, not like the English woman, on commission; she keeps it all and calls for more when she wants it.

I put my bees in the cellar the 14th of this month. The bottoms of the hives are nailed on. I tier up the 54 hives 3 high in rows, 5 without any special ventilation in a room partitioned off in the back end of my cellar 12x12 feet. I have practiced this for 20 years and my loss has not averaged 5 percent, except when they have been short of stores.

I use the 4¼x4¼ sections, 7 to the foot, 28 in a case. My hives are 19x14, outside measurement, and 9½ deep, so you can see I have no waste room in the hives, nor a lot of traps to look after in the fall or winter. I believe in simplicity and utility. The one-piece square section is good enough for me. Sensible people will soon find out that the tall section fad is more for



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looks than to hold honey, and some of the old "honest Johns" will not be slow in comparing weights with them. Honesty is the best policy if a man wants to hold his home market sure.

I think Mr. Hasty is often too hasty. What suits one locality does not suit another. Like the tariff, some want high, some want low, and some none. Some want large hives, some small; some want side room to store in, some top. Give me a hive that my bees can increase in, and give them room on top as fast as they need it, and not a day faster.
WM. CLEARY.

Kossuth Co., Iowa, Nov. 29.

Bees in Good Condition.

My bees are in good condition. I carried 2 colonies into the cellar the first of December. They were all good and heavy.
HENRY BRICKER.

Defiance Co., O., Dec. 23.

The Pennsylvania Bee-Keepers' Association.

On page 554 of the issue for Dec. 22 I find a report of the first annual convention of the Pennsylvania State Bee-Keepers' Association. I find in Volume XI, pages 108 and 109, that the Pennsylvania Bee-Keepers' Association was organized in the city of Erie, Oct. 1, 1873, at the time of the State Fair. The officers elected for the first year, and who took their respective offices at once were: President, Seth

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Hoagland, of Mercer County; vice-presidents, John Sunell, of Dauphin County, and A. J. Lee, of Crawford County; secretary, W. J. Davis, 1st, of Venango County. Among those present, and joining the society, were J. R. Ely, president of the State Agricultural Society, Mr. Ray, of Westmoreland County, P. Morris, editor of the Practical Farmer, Dr. W. H. Eagle, of Harrisburg, and others from the central and eastern part of this State.

The report of the meeting makes very interesting reading, even now after the lapse of 31 years.

Mr. Hoagland reported that his colonies paid him in honey and increase $80 per colony, spring count, in 1873. James Russell, the treasurer, of course took charge of the funds of the society, some $16 or $18. Would it not be well for the present P. B.-K. A. to inquire about the ex-treasurer of the society of 1873? W. J. DAVIS, 1ST.

Robertson Co., Pa., Dec. 22.

Fine Weather—Honey Scarce.

The weather is fine so far but dry. There is not much hope for white clover in this part of the country. Honey is scarce now, and prospects are for better prices. A. A. HOUSER.

McDonough Co., Ill., Dec. 15.

Honey-Producers' Association Collapsed.

At a meeting of the stockholders of the Central California Honey-Producers' Association, held at Hanford last Monday, it was decided to disincorporate the organization. The cause of this move can not be accounted for in any other way than to say that there was a lack of confidence in the management. The condition of the business for the past year looked bad, and the stockholders did not want to take a chance at being run seriously into debt another year. At any rate, the benefits received from the organization were very slim. The collapse of the association is of no credit to the man who held the position of manager.—Kingsbury [Calif.] Recorder, Dec. 14, 1904.

CONVENTION NOTICES.

Wisconsin.—The Wisconsin State Bee-Keepers' Association will meet in the Supervisor's Room in the Court House, at Madison, Feb. 1, 2, 1905. All bee-keepers are invited to attend.

Augusta, Wis. GUS DITTMER, Sec.

New York.—The Jefferson County Bee-Keepers' Society and New York State Association will hold their meeting in the City Hall, Watertown, N. Y., Jan. 17 and 18, 1905. The general manager, N. E. France, and other prominent bee-keepers, are expected to speak.

Black River, N.Y. GEORGE B. HOWE, Sec.

New York.—A bee-keepers' institute, under the auspices of the Bureau of Farmers' Institutes of the State of New York, will be held at Fulton, N.Y., Monday, Jan. 16, 1905. Mr. N. E. France has been engaged by the Department of Agriculture, as speaker. The annual business meeting of the Oswego County Bee-Keepers' Association will be held at the same time and place. CHAS. B. ALLEN, Sec.,

Central Square, N. Y.

MORTIMER STEVENS, Pres.

New York.—The Fulton and Montgomery Counties Bee-Keepers' Society will hold the next meeting at Amsterdam, N. Y., Thursday, Jan. 19, 1905, in connection with a bee-keepers' institute. Arrangements have been made with F. E. Dawley, Chief of the Bureau of Institutes, to furnish Mr. N. E. France, General Manager of the National Association, as the principal speaker, and all are cordially invited to come. This will also be the annual business meeting of the society. T. I. DUGDALE, Sec.

West Galway, N. Y.

New York.—A series of bee-keepers' meetings have been arranged for in this State, as follows: Syracuse, Jan. 15; Watertown, Jan. 17, 18; Romulus, Jan. 11; Cortland, Jan. 13; Fulton, Jan. 16; Amsterdam, Jan. 19. Mr. N. E. France. the general manager of the National Bee-Keepers' Association, has been engaged to address the meetings, by the State Department of Agriculture. through the Bureau of Farmers' Institutes, F. E. Dawley, Director. The convention at Watertown, Jan. 18, will be the meeting of the State Association, at which many of the

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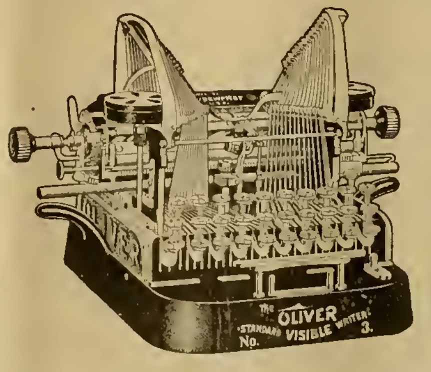
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progressive bee-keepers of this and adjoining States are expected to be present and take part in the discussions.
C. A. Howard, Sec. W. F. Marks, Pres.

Nebraska.—The annual meeting of the Nebraska Bee-Keepers' Association will be held at the Experiment Station at Lincoln, on Monday, Jan. 16, 1905, at 2 p.m. Will you be there and favor us with a paper along the lines of bee-keeping in which you are particularly interested? It is hoped that Ernest R. Root will be present for a good talk. Headquarters will be at The Windsor Hotel, where cheap rates have been secured. This will be one of the first meetings in the weeks' series; let us have a good one. L. D. Stilson, Sec., York, Nebr.
E. Whitcomb, Pres.

Michigan.—The Michigan State Bee-Keepers' Association will hold its annual convention Feb. 23d and 24th, at the Eagle Hotel in Grand Rapids. The Eagle Hotel is located at 65 to 71 Market St., cor. of Lewis St., one block south of Monroe St. It will give a rate of $1.50 per day, and furnish a room free for holding the convention. The Michigan State Dairymen's Convention will meet in Grand Rapids at the same time, and advantage may be taken of this fact to secure reduced rates on the railroads. When buying your ticket, ask for a certificate on account of the Dairymen's Convention. The secretary of the Dairymen's Association will sign this certificate which will then enable the holder to buy a return ticket for one-third fare. Several associations often thus meet at the same time and place, the secretary of one association signing the certificates for all of the associations, the same being done with the knowledge and consent of the railroads—it simplifies matters. Grand Rapids is the second largest city in the State, easily accessible from the north, south, and central parts of the State, in the heart of a good bee-country, and, with the low rates assured, there should be a large crowd in attendance.
W. Z. Hutchinson, Pres.

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Honey and ✢ Beeswax ✢

Chicago, Dec. 7.—The market is well supplied with all kinds of honey; the demand is of a light nature. Fancy comb honey brings 14c, but quality as well as appearance is necessary; No. 1 sells at 12½@13c; off grades difficult to move at 1@3c less. Extracted, choice white, 7@7½c; amber, 6@7c, with off grades about 5½c per pound. Beeswax, 30c.
R. A. Burnett & Co.

New York, Dec. 7.—Receipts of late have been quite heavy, and while there has been a fair demand, it has not been up to former years and stocks are somewhat accumulating, consequently prices show a tendency to decline, and in large lots quotation prices as a rule are shaded. We quote fancy white at 14@15c; No. 1 white at 12@13c; amber, 11c; buckwheat, 10c. Extracted in fair demand at 6@6½c for white clover; 5½c for buckwheat; 50@60c per gallon for Southern, according to quality. Beeswax firm at from 28@29c.
Hildreth & Segelken.

Kansas City, Dec. 30.—The best comb honey is selling at $2.25 per case of 24 sections, and the demand for same is very slack. Extracted is moving fairly well, fancy stock selling at 6½@7c. We look for the market on comb honey to improve shortly after the first of the year, as the dealers will have the stock that they bought for the holiday trade about cleaned up. Beeswax in good demand at 30c.
C. C. Clemons & Co.

Philadelphia, Dec. 24.—As usual around the holidays, there is not much call for either comb or extracted honey. Prices remain about the same as the last quotations. Some odd lots having arrived in the market in the last 10 days weakened the price of lower grades. Fancy white comb, 15@16 cents; No. 1, 13@14c; amber, 11@12c. Extracted, white, 7@8c; amber, 6@7c. Beeswax, 26c.

We are producers of honey and do not handle on commission. Wm. A. Selser.

Boston, Dec. 22.—During the honey season the honey demand has been practically at a stand-still. Stocks seem to accumulate rather than to diminish. While prices are practically as per our last, yet on the whole, the tendency seems to be to a lower level. Our market today is practically as follows: Fancy white, 16c; A No. 1, 15c; No. 1, 14c, with practically no demand for No. 2. Extracted, from 6@8c, according to quality.
Blake, Scott & Lee.

Cincinnati, Dec. 30.—Since our last report was published, the price of extracted honey has advanced, no doubt acting in sympathy with the sugar market. We quote amber extracted in barrels at 6@6½c; white clover, in barrels and cans, 6½@8½c. Fancy comb honey, 13@14c. Beeswax, 28c. The Fred W. Muth Co.

Albany, N.Y., Dec. 26.—Comb honey is moving off very well considering the heavy receipts and cold weather. Prices not as high as early fall, as usual, but very good yet. Fancy white, 14@15c; No. 1, 13c; mixed, 12@13c. Buckwheat, 11@12c; mixed, 10@11c. Extracted, dark, 6@6½c; light, 6½@7c. Beeswax, 28@30c.
H. R. Wright.

Cincinnati, O., Dec. 19.—Comb honey is now coming in more freely, and prices if anything have moderated a little. The sales made and prices obtained were for No. 1 fancy water-white comb, 12@13½c; single cases, 14c. Extracted is sold as follows: White clover, in barrels, 6½c; in cans, 7½@8c; amber, in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c.
C. H. W. Weber

San Francisco, Dec. 28.—White comb. 1-lb. sections, 11½@12½c; amber, 9@11c. Extracted white, 6@6½ cents; light amber, 4½@5½c; amber, 3¾@4¼c; dark amber, 3@3½c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

There are no heavy quantities offering of either comb or extracted, but more than immediate custom can be found for at prevailing values. The demand at present is very light and is mostly local.

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American Bee Journal

AGRICULTURAL COLLEGE

45th Year. CHICAGO, ILL., JAN. 19, 1905. No. 3.

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J. M. HAYNES AND APIARY, OF TAMA CO., IOWA.
(See page 36.)

FOR 1905.

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Honey Extractors

The honey extractors of 1905 have steel stampings in many places where gray iron castings were used formerly. These stampings are so ribbed and braced that the construction of the baskets will be much stiffer than formerly with no possibility of any of the parts breaking.

Wire Imbedder

Our new spur wire imbedder is a great improvement over the old one. Although it costs 20 cents and the old one sells for only 10 cents, it is 10 times better. It does very neat, pretty work and the special construction of the teeth with the groove makes it easy to follow the wire during the process of imbedding.

Perforated Zinc

A complete new set of dies and press have been made during 1904 for turning out perforated zinc, so that our 1905 product will be even better than before.

Smokers

Some minor improvements have been made in our smokers by which the blast will be increased and the general construction throughout stiffened. A very neat and strong brace is placed in such position that the legs supporting the cup or stove can not be twisted or bent out of shape without crushing the whole smoker.

Fences

Some of our fences for the supers will be nailed as well as glued. This will enable the user to clean off the propolis by immersing them in boiling water, a fact which will be appreciated by many.

Root's Automatic Extractor

✣

We have got it at last. An automatic reversible honey-extractor that will reverse the pockets while in motion by simply pressing on a lever. The extractors are no larger than the Cowans, and reverse without bang or slam, provided the directions are followed. They are equipped with street-car band-brake, noiseless gearing, gearing on top of the reel out of the honey, and out of the way of putting in and removing the combs. We have the 4-frame size all ready for delivery. Six-frame, 8-frame, and 2-frame sizes will be ready shortly. Price will be only $2.00 above the regular price for 2, 4, 6, and 8 frame Cowan extractors, respectively.

Wax-Tube

The Van Deusen wax-tube fastener is made of one piece of brass tubing drawn down to a point. It is a much neater and better tool than the one sold last year.

German Wax-Press

The German wax-press is now so improved that it has a threefold use. First, as a wax-rendering device and press to squeeze out slumgum clear of wax. Second, as a press for squeezing honey out of cappings, bits of burr-combs, chunk honey and the like. Third, as an uncapping can for uncapping combs preparatory to extracting. This last feature will prove invaluable because the cappings will drop into the basket, and when the uncapping is done the cappings can be squeezed until they are dry, the honey running out at the spout. Three machines for the price of one. And our price has been reduced to $12.00.

Bee-Veil

Our bee-veil for 1905 will have rubber cord sewed in the bottom edge so that the top as well as the bottom will be elastic. If the directions are followed the edge of the veil can be made bee-tight around the waist or coat, effectually protecting the wearer. We will still furnish veils with silk binding and when called for can supply them.

Cover

The Excelsior cover will look about the same as before except that its construction will be simplified and strengthened, making it better in every way to withstand extremes of hot and dry weather. It will be used on all our hives including the Danzenbaker, as it has stood the test of many years, and for a general purpose cover we know of nothing better.

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Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

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GEORGE W. YORK, Editor. CHICAGO, ILL., JAN. 19, 1905. Vol. XLV.—No. 3.

Editorial Notes and Comments

OUR TOIL DOTH SWEETEN OTHERS

Popularizing the Value of Bees and Honey.

Last week we mentioned having received a beautiful bee and red clover calendar from Mr. W. F. Marks, of New York. Since then we got the following letter from him concerning it, and offering a further suggestion :

> DEAR MR. YORK :—Yours of the 5th inst. received. I hasten to say that I am not entitled to *any credit* for the design on the calendar in question. The design is used as a cover for the Red Clover Writing Pad, sold at many stationery and book stores. I only took this means of calling your attention to the design, which I considered very unique and appropriate for bee-culture, and it seems to me it embodies a suggestion that we, as honey-producers and bee-lovers, should be prompt to grasp.
>
> For instance, how can we reach the great mass of the people any quicker and easier than by placing a school writing pad upon the market with an appropriate and attractive cover design, one page devoted to the natural history and importance of the honey-bee, a denial of the comb-honey canard, and the importance of honey as food, etc.?
>
> It seems to me that such a pad placed upon the market would naturally go into thousands of schools, and tens of thousands of homes, and having an intrinsic value, it would be preserved, read, re-read, and remembered by the class we want to reach. We could have such a pad manufactured for us in large quantities, and could dispose of them at wholesale at a price sufficient say to cover expense ; in fact, we could, under the circumstances, sell them at less than cost, but that would not be necessary, and certainly not a good business proposition.
>
> Perhaps this suggestion is visionary, but I trust you will not put it aside without giving it careful consideration.
>
> W. F. MARKS.

We believe the suggestion Mr. Marks makes is a good one, and ought to be followed up by the National Bee-Keepers' Association. No doubt there are many other things used by school children that might have printed on them something about bees and honey. We really think that if the Board of Directors, of which Mr. Marks is chairman, would take hold of this matter some of the funds of the National could be better invested than in some other ways that might be recalled. Such expenditure would be along the line of advertising a wider use of honey, and thus would help increase its demand. Whatever increases its demand, if persisted in, will surely help the price of honey, and thus be a benefit to every honey-producer.

Why not put a little thought along the line suggested by Mr. Marks and others, and see if a more extended use of honey can not be secured ? There seems to be little trouble now about producing honey. What is needed is a larger demand or outlet for it. The National Association can do no better, we believe, than to put some of its effort and money in the direction indicated.

Doolittle's Queen-Rearing Methods.

The following item appears in Praktischer Wegweiser :

> "The Doolittle American method of bee-culture—also much extolled by many German theorists—appears, according to the Imkerschule, not to fulfill expectations ; indeed, even Americans themselves are allowing it gradually to sink into oblivion ; for them, also, nothing excels after-swarms for queens, quality considered."

Our worthy contemporary, the Wegweiser, may say to Imkerschule that some one has been fooling it ; the Doolittle plan, under different names, and with more or less variation, is more firmly established in this country than ever before. The probability is that if all queen-breeders had to depend upon afterswarms to the exclusion of Doolittle cells, many of them would go out of the business. Indeed, it is getting to be considered more or less of a reproach to have afterwarms at all.

Illinois Leads in the National Association.

We learn from General Manager France that there are now more members of the National Bee-Keepers' Association in Illinois than in any other State. The others in order follow thus : California, Wisconsin, New York, and Texas. All other States have less than 100 members each. Illinois has over 300. New York State, at one time, claimed to lead in membership, and, if we remember, some one from there thought on that account New York was justified in having three of the twelve members of the Board of Directors. Illinois has only one member on that Board, and we don't know any one in this State that thinks we should now have one-fourth of the Board. Of course, New York is not to blame for having a majority of the Board. They were all duly elected by ballot by the membership. It is simply New York's good luck, or because she has so many able bee-keepers.

What is Honey ?—Definitions and Standard.

This question has often been asked, and has recently come up again. Prof. A. J. Cook, of California, answers it in this way :

> I have been amused at the way this question has been answered by several of our bee-keepers. I feel certain that there is but one legitimate logical answer. Honey is the sweet that bees store in the hives. It is impossible to give any other answer. It usually is digested nectar, for its source, for the most part, is from flowers. But no one can know at any time that there may not be an admixture of honey-dew, cane-sugar, possibly filched from some store, or,

more likely, juices from various fruits. In any event, when nectar passes to the bee's honey-stomach, it is so changed that we may well call it "honey", as it is put into the comb.

I have fed pure cane-sugar to bees and have had the resulting honey sampled by experts, and they not only pronounced it honey, but the best they had ever eaten. This kind of honey though would always be too expensive to put on the markets. I notice in the last Bee Journal it is suggested that honey-dew honey is not honey because it is not collected from flowers. I have known such honey to be of rare excellence. Indeed, I believe that not a little of the very best honey often sold as basswood or clover comes from honey-dew. I believe that the secretion of nearly all our aphids will produce a honey of superior flavor and excellence. This is no mere guess, but the result of actual observation for a series of years. A. J. COOK.

Under "Food Definitions and Standards", a circular recently sent out by the Bureau of Chemistry of the United States Department of Agriculture, there were "schedules prepared by the Committee on Food Standards, Association of Official Agricultural Chemists". They referred to "sugars and related substances". Of course honey was included, and the following were suggested as the definitions and standard:

1. *Honey* is the nectar of flowers and saccharine exudations of plants gathered and stored in the comb by bees.
2. *Comb Honey* is honey still in the comb.
3. *Extracted honey* is honey which has been separated from the comb.

Standard honey is honey which is lævo-rotatory to polarized light, contains not more than twenty--five (25) percent of water, not more than fifteen one-hundredths (0.15) percent of ash, nor more than eight (8) percent of sucrose.

These suggested definitions and standard of honey were sent out in order to get the opinions of various experts before adopting them, and so were "subject to revision". We are inclined to think that the "definitions" given are fairly good. As to the "standard", we are not chemist enough to say.

Perhaps others of our readers besides Prof. Cook, who have made a study of this subject, would like to express themselves. If so, our columns are open.

Miscellaneous News Items

Our Advertisers, we believe, are a lot of most honorable and reliable firms. We are glad to recommend them to our readers. We also believe they are all reliable in their dealings, else they could not get into the advertising columns of the American Bee Journal.

When writing to any of them, we would like to urge you to mention having seen their advertisement in the American Bee Journal. This would help both the advertiser and us. The more business they get from having their advertisements in the American Bee Journal the better satisfied they will be with it, and the more they will advertise in it hereafter.

Scarcely any periodical published to-day could exist if it depended entirely upon its subscription price. So the advertisers are a great help. This journal is no exception to the rule in this regard.

We want the American Bee Journal to be a benefit to its advertisers as well as to its regular subscribers. Their interests are mutual. We would like to bring them nearer together, so that each will understand the other better.

In and through it all, the American Bee Journal desires to be helpful in every possible way to those who either read it or advertise in it. All we want is the permission to do our part.

Not Quite as Gentle.—In the letter from Fred Bechly, of Poweshiek Co., Iowa, on page 14, he is made to say that he finds the golden Italian bees quite as gentle as the three-banded. It should have read "*not* quite as gentle".

Temperance Life Insurance Company.—Your attention is called to the advertisement of the Total Abstinence Department of the Security Mutual Life Insurance Company and the National Total Abstinence League. This department has had an experience of nearly four years and a half. The mortality ratio proves, beyond doubt, that abstainers are desirable insurance risks.

The Apiary of J. M. Haynes is pictured on the first page this week. Concerning himself and his apiary, Mr. Haynes wrote as follows when sending the photograph:

I am 55 years old, and have been a farmer all of my life. I have 391 acres of land. As my health failed so that I couldn't do heavy work on the farm, I went into the bee-business. I have 90 colonies under a shed the year around.

The bee-shed is 6 feet wide. The front is 8 feet high, sided down half way. The hives are set at the front, so I do the bee-work behind them under the shed. The shed runs 64 feet north, 68 feet west, and 64 feet south. I use the Langstroth 10-frame hive, with 28 sections in the super. I don't extract any. I let the bees do the work, and I sell the honey.

It was a poor year here for honey the past year. It is worth 19 cents a pound now. J. M. HAYNES.

The Defunct Honey-Producers' Association, referred to in an item on page 30, is thus commented upon by H. L. Weems, of Kern Co., Calif.:

EDITOR AMERICAN BEE JOURNAL:—With only the friendliest and kindliest feeling for all concerned, I can not silently see what seems to me, in the clipping from the Kingsburg (Calif.) Recorder of Dec. 14, a gross injustice to the manager of the defunct Central California Honey-Producers' Association.

I was a stockholder in that organization, and suffered as great pecuniary loss as any member in it. Therefore, I believe I am as much entitled to discuss the mistakes of its management as any one. It is true there was lack of confidence. Not in the manager particularly, but among all the stockholders. With but few exceptions each was suspicious and distrustful of his neighbor almost from the very beginning of the organization. Each locality was jealous of every other locality. Each had its own plan for perfecting the organization, and all other plans were radically wrong. There was no spirit of concession or compromise. So that it was impossible to perfect an organization wholly satisfactory even to a majority of the stockholders.

Every meeting was an occasion for prolonged, and, in certain instances, acrimonious debate. Every one was honest and sincere in the belief that his view was the only correct one, but suspected the honest motive of his neighbor. On this account it was impossible to secure the adoption of a code of by-laws.

But through all these stormy scenes there was not one who commanded greater respect and confidence than the president and manager of the Association. This is evidenced by the fact that he was elected and re-elected, and his offer to resign afterwards declined. It was through his efforts and sacrifice of time, money and personal interest, more than any other, that the organization lived as long as it did.

It was he who made the interest of every bee-keeper his own personal concern, and sought to reconcile every conflicting interest that arose. It was he who came to the support of the editor of The Recorder, when, as publisher of a bee-paper at Tulare, afterwards the Western Bee Journal, he was fighting against odds for a place among publishers of bee-literature. The support given at this time was loyal to the last degree. It was loyalty itself. The new bee-paper's friends were *his* friends; its foes, his foes.

The Central California Honey-Producers' Association is a thing of the past, but its failure to live and prosper is not the fault of any one man. The organization was formed for the express purpose of marketing honey collectively in car-loads through a single head. The stockholders refused to fulfill the purpose of its creation by adopting by-laws and giving the Association control of their honey when ready for market.

Not more than 10 percent of the stock issued was fully paid for, and without any honey to handle it was not surprising that "*the condition of the business for the past year looked bad*". The only wonder is that any one would expect a business to succeed without cash, credit, merchandise, or other resource to start on. Tall oaks from tiny acorns grow. But it takes time and plenty of sap. Of course, the "benefits received were very slim".

The editor of The Recorder was himself a member of the Board of Directors of the Central California Honey-Producers' Association, and, with the other members of that body, directly responsible to the stockholders for the conduct of its business. If any discredit attaches to the management he should either accept his just share or else make it clear that he was in the minority in all its transactions; in which case it will be hard to make the manager's one pair of shoulders carry it all. H. L. WEEMS.

Contributed Special Articles

California as a Home and for Bee-Keeping.

PROF. A. J. COOK.

MR. BROWN, a long-time bee-keeper of Ontario, Canada, and as long a subscriber to the American Bee Journal, asks me many questions about California. Similar questions have been asked by a good many of late, and though I have replied to such inquiries before, it has been some time since, and the numerous new subscribers that come in each year will certainly find it wholly new. The fact that Mr. Brown, one of our most experienced and intelligent readers, desires further details makes it seem probable that the matter will not be without general interest.

It has been my privilege to live in four of our States—Massachusetts, Illinois, Michigan, and now California. Of these, it seems to me California is incomparably superior as a home. Indeed, if one has pleasant employment, I do not see how he could wish for more than a home in this beautiful Southland. The scenery is certainly all that one could wish. The rugged mountains with their bared cliffs and the ever-varying hues of light and shadow become more and more entrancing as one lives among them. I have heard it said of California, as I have often heard it said of Washington, D. C., that any one who has sojourned here for a short period is never content to live elsewhere. I believe our grand old mountains have much to do in creating this fondness. The climate of California has even more to recommend it. It is always summer. Even this day after Christmas I have been choring around without coat or vest, and with no discomfort. To me the summers are equally pleasant with the winters, and I should regret to feel that I could not always spend my days in this blessed land of warmth and sunshine.

I am also very much attracted to California because of its great variety of fruits. There is not a month of the year that we can not pick ripe fruit from tree or vine. Not only is the variety of our fruit surprising, but its quality for the most part is equally worthy of praise. Of course, in these days of rapid transportation, any table anywhere in our land may always be graced with the finest of fruit, yet there is a pleasure in stepping out and picking it from one's own tree—watching it grow and mature—that I find most delightsome. It would take a pretty big inducement to wean me from the splendid orchards of our Southern California.

I should also mention water as one of our great attractions; not its abundance, for that is our great lack, but the fact of the possible absolute purity of our water is to me one of the prime attractions of our regions. Let me take Claremont as an example. Our water is pumped some hundreds of feet. It is received into a covered reservoir with two separate compartments. From these it runs in underground pipes till we draw it from our hydrants. Thus we see that there is no possible chance of taint, and such dreaded scourges as typhoid fever may surely be barred out. What is true of Claremont may and will be true some day of nearly our whole region.

I have kept the best for the last. I now refer to our people. I doubt if for intelligence and morality they are surpassed anywhere in the world. We might almost be called *New* New England. And as I have lived in Massachusetts I am free to say that I think the "New" is an improvement. There is a generous responsiveness, a willingness to lend a helping hand among the people of Southern California that one rarely sees. So far it has been a very prosperous country, and it is possible that it is this that has awakened these generous impulses in our people.

But now we come to the other side of the question, the delights of living in this region are so many and so patent that they have been noised abroad. The salubrity, too, of our climate brings many here for health. This may make it difficult at times to secure just the employment one would like. Yet it seems to me that this depends very much upon the person. As for myself, I have often wished that I might be two or three men, for I am sure I could keep each one happily employed. Thus, while I would not wish to induce any one to come here with the certain expectancy for work to their hands and to their living, I have never yet seen willing hands idle. Indeed, there has been a good deal of complaint of scarcity of labor in our orchards. Surely, orchard work is very pleasant, though it is particular work, and I can readily see how by a little carelessness, or want of interest, one would soon cease to find employment. I doubt if there is any more interesting manual work in the world than caring for an orchard. At the same time I doubt if there is any work that requires more painstaking care in every detail. Orchard culture here is intense, carried on in a perfection that is truly admirable. Thus, the slovenly or indifferent worker will surely have trouble to find employment.

I have often written of bee-keeping. When we get a good honey-year we eclipse the world. Enthusiasm, however, will be modified when I state that such years are not oftener than one in three. The second of the three will be indifferent, while the third will be attended by actual absolute failure. Even with this showing our best bee-keepers average 75 pounds per colony per year, and the honey crop of a single season, with some of our apiarists, reaches to several car-loads and to several thousands of dollars.

Mr. Brown asks if we would need to serve an apprenticeship here. I think not. Bee-keeping is much the same everywhere. Here we have no trouble with winters, but, of course, in our years of drouth feeding is strictly in order. The expert bee-keeper would at once see the point, and a little talk with a good apiarist would make him capable of handling his bees profitably. Such men as Hatch, Hambaugh, and others—excellent bee-keepers East—come here and take a front seat at once. I do not think that any one who has made a success of apiculture in the East need fear to try it here. If he selects his location carefully I do not think he could do better in any other part of the world.

If I have not answered Mr. Brown as fully as he wishes, or if any reader of the American Bee Journal wishes more information and will ask specific questions, I shall be glad to answer them as best I may.

Los Angeles Co., Calif., Dec. 26.

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No. 2.—What is the Best Bee-Hive?

BY ALLEN LATHAM.

(Continued from page 22.)

IN spite of all I have said in favor of the closed-end frame, I should hesitate to adopt it and hang it lengthwise of the hive, for it needs to be hung crosswise of the hive, that is, parallel to the entrance, if it is to fulfill its mission. In like manner little is to be gained in hanging frames across the hive, if at the same time they are free-hanging, for crosswise hanging and closed-ends are a pair which must go together—complements which make a whole.

Read what is said on pages 468 and 469 (1904). There you may learn that most of the fraternity are against a crosswise-frame, while, though several are non-committal, only one or two come boldly out in its favor. Permit me to take up the objections as offered and treat them as they deserve.

First, a few prominent bee-keepers say that such a frame is not in common use, and they wish one which is standard, that is, used by the people. Well, once upon a time it was the custom to take the corn to mill on horseback, and when the bag was only half full to put a stone in the top to balance the bag across the horse. One day a stupid boy was too lazy (?) to find a stone, and so after tying the bag divided the corn into equal portions, hourglass style, and thus threw it across the horse. "Here, boy", says his father, "why do you load up in that silly way? Isn't the way your father, your grandfather, and his father before him, carried corn to mill good enough for you? Hustle now and find a stone, or I will put the cane to you."

One says that wax-worms are worse in hives with such frames. All that I can say is that the wax-worm knows a good, warm place when he finds it, and will take it every time, if he can.

It is stated that bees build less even comb. This seems to me quite likely, though I have had many beautiful flat combs built in such frames. At any rate, it is a minor matter since comb foundation is so generally used. It is surely not an objection of sufficient weight to rule out such a frame.

Another says that such frames will call for new supers, basing his suggestion on the supposition that the crosswise frames will be of such size or number that the hive will be of a different size. This does not follow, and hence the objection can not hold.

Too short for brood-combs, says another. Why? My crosswise frames are 10 by 12 inches, and 11 in number, and they seem to work all right.

Too short for outdoor wintering. Yes, indeed, if hung lengthwise and free, but not otherwise. Try it and be convinced.

More frames to manipulate. This objection is made on the ground that the old size of hive-body is still used with the entrance at the narrow end as before, and is a reasonable objection. It is true that more time is taken in going through 12 frames than in handling 8 or 10, but if one handles bees as little as he needs rather than as much as he is moved to, I think that he will find little trouble with the extra number of frames. I find, too, that I handle practically no more, for it is not necessary, as a rule, to handle more than three or more frames for nine out of ten purposes in manipulating frames, and the smaller the frames the easier.

Interferes with free passage of bees. Prove it. If one will study the bees in an observatory hive he will see much that will lead him to believe that this objection is without foundation. The only time when bees need extra passage is when honey is coming in rapidly. At such times supposedly the bees find a readier passage through the hive by traveling on the end-bars. So, once it was believed that the earth was flat. Space will not permit me here to go into details to show that this objection is utterly without weight. I can only deny it with the assurance of one who has seen proof to the contrary.

It gives the bees less chance to ventilate the hive. This objection would condemn the crosswise frame if I had not found a way clear to get around the difficulty. By having the space below the frames about an inch deep in front and decreasing as it goes back till it is a scant bee-space under the last frame, ample opportunity is given the bees to ventilate their hive. Mind you! gives the bees opportunity to ventilate the hive themselves, does not allow Nature to do it the very time when the bees don't want it done; for that is just what the free-hanging frame, which is lengthwise, does.

By far the greatest number of those who answered the query on page 468, raised the objection that such a style of frame would not allow the tilting of the hive forward to let the water out. Well, I always was opposed to this tipping-forward plan, for, to my mind, the hive ought to be level all around, but the water is objectionable, and, forsooth, how can you get rid of it except by tilting the hive? It really ought to make a thoughtful person smile to read this objection. If the crosswise-frame is a thing of value shall we let such a little difficulty prevent our adopting it? In my own hives I simply slope the bottom-board, as will be seen from what I say above in regard to space below the frames, and I have the satisfaction of seeing my hives stand up straight like my house. By the way, why not tilt your house to keep the rain from getting into the front door?

Now it is really unkind to make fun at all, for do we not know that nearly all of those good brothers were asked to answer a question concerning which they had only opinions without experience? Listen to what one who has had the experience says:

"R. C. Aikin (Colo.)—Practically none. I have used extensively such in the past; they are better for nearly every purpose than the long Langstroth frame. They cost a little more, but that is a very small item. First cost is a trifle if it gets better results later. Without a detailed argument, let me say that I *know* short frames are all right for results in breeding, and the super arrangements can easily be adapted."

Thus speaks one who knows. Such a statement should have great weight, and should carry conviction to the extent of causing many to try a few hives the coming season with such frames. New London Co., Conn.

(Concluded next week.)

Our ∴ Sister Bee-Keepers

Conducted by Emma M. Wilson, Marengo, Ill.

Paste for Rough Skin.

For rough, harsh skin of arms and shoulders mix a quarter pound of unsalted lard, which has been washed in rain water and then in rosewater, with the yolk of an egg and a tablespoonful of extracted honey. Add enough oatmeal to make a paste. Spread on the arms and leave for an hour.—Chicago Daily.

Starting in Bee-Keeping.

Here is a clipping from the woman's department of the Chicago Daily News, being a reply to an inquiry, which is remarkable for the wholesome moderateness of the expectations it arouses:

> "I kept bees for many years, and at present have about 10 colonies. Twenty-five dollars would buy about 6 colonies at the cheapest. Then it would require about $15 worth of supplies—that is, supers and sections for the bees to store the honey in, to say nothing of the work. In a very good season they would average about 70 pounds per colony.
>
> "The last three years the bees had one good season. In other words, every third year is a failure. Some winters bee-keepers lose from 30 to 50 percent in bees. To make a living at bee-keeping would require 125 to 150 colonies, which would cost, including all tools, extra hives, supers, etc., $800 to $1000, besides a number of years' experience. One can't get enough of that."—A. H. O.

"Hiving Bees with a Shot-Gun"—Pleasures of Bee-Keeping.

I have been a reader of the Ameican Bee Journal for nearly two years. Having charge of an apiary of from 20 to 40 colonies, my experience with bees has been both interesting and profitable. Our apiary produced 2300 pounds of comb honey, mostly in one-pound sections.

There are many interesting items in the American Bee Journal. The article in Dec. 15th number, on "Hiving with a Shot-Gun", excels anything I ever read in the way of hiving. For marksmanship it is beyond parallel—he must have telescopic vision to be able to give the dimensions of a twig 50 feet from the ground, and to arrange the hive so accurately that the cluster fell in exactly the right place. Verily, this is a remarkable age. Bee-culture opens a field of varied and practical knowledge, the pursuit of which is one of the great pleasures of life.

We anticipate much from our apiary the coming season. I am one of the bee-keeping sisters, although not enrolled as a member. L. Fees.

Davis Co., Iowa, Jan. 3.

Sometimes the written description of a thing makes it appear more difficult than it really is, and it is just possible that if you had been an eye-witness of Mr. Stolley's performance it would not appear so remarkable, although certainly a novice would hardly succeed as he did. I don't know how many hunters there are with you, but "in this locality" there are many who would scorn to aim at the bull's-eye at so short a distance as 50 feet, as a test of their marksmanship, and they would by no means consider his aim as beyond parallel. You think "he must have telescopic vision to be able to give the dimensions of a twig 50 feet from the ground", but you forget that all he would have to do would be to pick up the said twig and measure it after it had fallen to the ground as the result of his good aim.

It doesn't look as if you or I could squint at a swarm 50 feet in the air and make a correct guess first time as to where the swarm would fall, but by standing straight under it a fair guess might be made. The secret of Mr. Stolley's correct guessing, however, he explains in that phrase, "By taking the proper bearings at right angles". I've seen Dr. Miller do that. He would stand off a little distance, and, looking up at the swarm, would then drop his eye to the ground and estimate where a line would fall that would pass through the point directly under the swarm. He could guess pretty well where that line would be, but he couldn't guess closely how far from him the point should be. However, he'd set the hive somewhere in the line, then he'd go off to one side and estimate a line at right angle to the first line, moving the hive accordingly, and after going backward and forward from one line to the other, he could pretty soon determine just about the right point.

We sisters might sight and cross-sight as well as a man, but when it comes to firing the gun most of us would rather call a man.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

INVITATION TO YOUNG BEE-KEEPERS.

Here's a gold eagle going a-begging—or, say, a roast pig running around squealing for somebody to eat him. Many young people like to write letters, I believe; and they mostly know they are not welcome to write to persons of note and station. If they should do so their letters would receive a hurried glance or two from a secretary, and then be pitched into a big waste-basket; and that would be the last of it. But here is a man of note that asks as a favor that young bee-keepers would write to him. Looks as though he has an attack of bee-fever. He has plenty of chance to read the wisdom of bee-doctors; but he wants to hear the experiences of other patients, especially those who know a good deal less than himself. So if you are under 18, and have been doing something with bees, write and tell him all about it. If nothing new or strange occurred to you that is no bar. The just-what-might-be-expected things are about as welcome as exceptional things are. He reproves us for neglecting the common things of Nature and running all the time after exceptional things. The man is Dr. Edward F. Bigelow, Stamford, Conn., editor of the Nature and Science department of the St. Nicholas Magazine. If he should not have time to write individual answers to all his young correspondents never mind about that. Have faith to believe he reads and enjoys what he has asked for, until a wholesale answer comes in his department of the magazine. Page 804.

LOSS OF YOUNG QUEEN IN MATING.

Young queens at mating-time often turn up missing from the place where they ought to be. The credit of this is usually given to birds, to dropping into trouble of some kind, water for instance, or to entering the wrong hive. As to the latter, the almost universal assumption has been that they do so by mistake. Adrian Getaz suggests that often there is no mistake about it—hives they try not the ones they would blunder into, if that was it, but distant and manifestly not-like-home places. If I may piece out a hint, they hover near the entrances of one colony after another until they find one where the smell, and the absence of hostile motions on the part of the guards, encourage them to make an attempt; and there they try it for live or die—often killed, occasionally accepted. How is this? I suspect there is a good deal in it. It assumes, of course, that the queen has, from some cause, a deep-seated dislike to her own proper station. "Baby nucleus" too-muchee, hive too open and drafty, too much syrup and too little honey, bees all of one age instead of properly assorted, nation with no national spirit, are some reasons that occur why a queen of high ambition might want to change. It is quite imaginable that the odor of a queenless colony might be perceptibly different from that of a colony with a queen. But when she doesn't find a queenless one she seems to try the next best one.

I hardly agree with him that a comb of honey presented, in a bucket or otherwise, is always attractive to a swarm. If the bees of the swarm are in a hungry condition (and that often happens) then they are very ready to climb onto a comb of honey. When they are distended with honey already (condition according to that usually described in the books), it has seemed to me that they regard a comb of honey poked at them as a sort of an insult. Pages 807, 808.

A LONG-TIME OUT-OF-DOORS BEES.

Ten weeks is a long time for a clipped queen and a few dozen volunteer bees to remain homeless out-of-doors. Still, it is possible that Wisconsin is right as to the origin of the little cluster that he found. If so, those bees were miracles of faithfulness and persistence in their attempt to make something out of a hopeless situation. We may well take off our hats to them. They keep one another warm part of the time, and grin and bear the cold and the wet the rest of the time. They take turns at bringing temporary lunch from the fields when there is any to be had, and suck their paws when there is none. Doubtless they often tried to move the dismembered queen to some other location by that bee-panacea, the process of "swarming", but always went back to her when she proved immovable. Page 810.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Depth of Supers on Langstroth Hive.

What should be the exact depth of supers used for both comb and extracted honey on Langstroth hive? Iowa.

Answer.—Supers vary in depth for the same hive, the depth depending entirely upon what the super is to contain. A super for a tall section will, of course, be deeper than for one not so tall. The depth should be about one-fourth inch more than the depth of the extracting-comb or of the section, together with any addition that must be made for any top or bottom bar that may be over or under the section.

Effect of Putting Bees on Drone-Combs.

If eight brood-frames were filled with foundation of drone-size, placed on a strong colony during a flow, and after the combs are completed and the honey extracted, and a strong colony with a fertile queen placed on the combs, would the queen lay only drone-eggs, or would the bees change part of the combs or rear workers in drone-cells? Ohio.

Answer.—I don't know what your bees would do; but I'll tell you what mine once did. I put a colony on drone-combs, and the queen wouldn't lay at all—the bees just swarmed out. It is possible, however, that in some cases they would stay and work; if so, I should expect them to contract the mouths of the cells to worker size and rear workers in them. I've known them to do that when part of their comb centrally located was drone-comb.

Running an Out-Apiary.

I have run an out-apiary of 100 colonies of bees for the last 10 years in connection with a farm, but I am giving up the farm and want to go more extensively into the bee-business. I intend to keep the 100 colonies on the farm, but I have a village lot about 2 miles away on which I wish to keep 50 colonies. Would it do to have one with queen-guards on all through swarming-time, keeping all queen-cells cut out and all brood well spread—that is, for producing extracted honey? I would probably not be able to go to the yard more than twice a week. Canada.

Answer.—If you cut out all queen-cells twice a week and keep brood spread, with colonies run for extracted honey, there ought to be little trouble with swarming. Yet cutting out cells, even twice a week, will not make an entirely sure thing as to swarms. Sometimes a colony, after being thwarted a number of times, will swarm with not a queen-cell in the hive. Even if the plan were always sure, it would be a lot of work to cut out cells twice a week. Shaking swarms as soon as each colony showed queen-cells would probably be as reliable, requiring a visit to the apiary once every seven to nine days. Another way would be still less trouble, and although not entirely successful with all, it is with some, and might be with you. As soon as you find queen-cells in a hive, take the hive off its stand, put on the stand a hive with empty combs, foundation, or starters, find the queen and put her in the empty hive together with the bees that are on the comb with her, and shake into the hive the bees from the other combs, or most of them; cut out all queen-cells, put a queen-excluder over the hive on the stand, and set over that the hive with the brood-combs. The bees will gradually fill the lower story, and at the same time the brood will hatch out above the excluder, and those upper combs will become extracting combs. Another thing that will help to keep down swarming is to allow an entrance to each story; move forward the second story until there is a ¼-inch space at the back end between the stories, and if you have three or four stories allow a space of the same kind over each one.

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T Tins—Economizing on Hives—Wintering Bees—Sheep in the Bee-Yard.

1. What are T tins, and what are their advantages?

2. I have a plan to prevent buying more new hives after securing a desired amount. One usually has a few empty hives in the spring, and I put the first swarms that issue into these, putting the parent colonies on other stands some distance away. When the empty hives are all filled I run the other swarms into the old hives, and continue so during the swarming season. I also take a couple of frames filled with honey from each of these old hives, putting frames of foundation in their places before running in the new swarm. I save the frames of honey for fall use. Please tell me what you think of this plan.

3. A recent number of the American Bee Journal advises bee-keepers to put their colonies into winter quarters having a large number of young bees. How is this done?

4. Some one speaks of having sheep keep down the grass in the bee-yard. Is there not danger that they will tip over some of the hives? WISCONSIN.

ANSWERS.—1. A T tin is a support of tin which has a flat bottom with an upright central part to give it rigidty; so called because a transverse section is the shape of the capital letter T upside down. Its advantages are that it takes up very little room, and is of great strength.

2. The plan is old, and properly managed may work all right. At any rate, the first part, running swarms into the hives with old combs will work well.

3. If you have none but strong colonies in the fall, you are likely to have plenty of young bees; so double up weaklings. Sometimes it happens that the honey harvest closes quite early, and there is no fall flow to keep the queen laying, so the bees may all be pretty old; in that case steady feeding may make the queen lay.

4. I don't know whether it works the same with others; but in my own experience neither cows nor horses are so bad as sheep about pushing hives off their stands. I suppose they do it by rubbing.

Yes, there's a lot for any of us to learn, and I should feel well satisfied if I could learn how to get 75 pounds of honey per colony each year and increase 50 percent, as you have done.

◆

Detecting Adulterated Beeswax.

I extract wax, sometimes doing it for other people. Now, suppose I had a lot of comb that originally was of the adulterated brand. The question is, "Has the adulteration been removed by the bees?" If it is still there will a Ferris or any other wax-extractor remove it in part, or, if not, can it be detected by analysis? I pride myself on pure, absolutely pure wax, and hope some time to handle more of it. When I extract a lot of wax, I use a piece of that lot for a gauge, and test other lots as per instructions found in the "A B C of Bee-Culture". I am innocent of any intention to cheat, but I am cheated myself, not by those from whom I receive comb, but from the original makers of the comb. You will see, if I use a piece of that lot, my gauge will test all other lots as pure when they are not. Is there any other way to make myself absolutely sure, outside the alcohol and water test? MASSACHUSETTS.

ANSWER.—My good friend, you are evidently troubled with a conscience, but in the present case I think the trouble need not be very great. Some years ago the number of those who manufactured comb foundation in this country was very much larger than it is now, those who at that time made it merely for their own use, having found that it was in the long run cheaper to buy it from those who made a special business of foundation-making. This would not be the case unless the purchasers were confident they were buying straight goods. I have bought foundation ever since there was foundation to buy—never made an inch of it myself—and I have no more thought as to its being adulterated than I do of the milk that comes from my own cow. The great bulk of foundation in this country being made by a few establishments that are above suspicion, there is little chance on the face of it for there coming into your hands old combs to be melted up, which combs have been made from adulterated foundation, simply because in the nature of the case there can not be much of such stuff in the country.

Now let us turn aside a minute and consider conditions in Europe. Thousands of Rietsche foundation presses (I think more than 15,000) are in use there, largely because the only way bee-keepers can be entirely sure they are getting pure foundation is to make it themselves: some of the foundation on the market being reported as being composed of only one-fourth beeswax. Now, did you ever stop to think why they object to buying the adulterated article? If it worked all right when given to the bees, they wouldn't know it was adulterated. Indeed, if comb foundation could be made of pure paraffin, and it work just as well as that made of beeswax, I am inclined to think I should use paraffin foundation because of less cost. The reason they object to it is that such foundation can not be used by the bees, being so much out of shape that no bee-keeper would allow it in his hives. So if it were possible that such comb could be used by the bees till old and black, you would probably detect it at first glance as having cells out of shape. I think no one has yet reported that adulterated foundation was worked out into perfect comb.

Answering specifically your question as to your gauge, and the danger of your using an impure article to gauge by, there's no need of your running any risk in the matter. Don't use anything to test by that you are not absolutely sure is pure wax, just as it came from the bees. That's an easy thing; for you can in a very few hours' time, without using any foundation in it, get the bees to build you a piece of comb sufficiently large for your purpose.

◆

Feeding Bees in an Observatory Hive.

I have a 1-frame observatory hive which I kept in a bedroom window last spring and summer. During a cool and rainy spell in the late summer it was necessary to feed the bees, and I did so very nicely from a saucer on the window-sill for a week or more, when the bees from hives in the garden—perhaps 100 feet from the house—began robbing, and I was obliged to give up the hive entirely, much to my regret.

Can you give me a plan for feeding bees in an observatory hive, and can I keep such a hive in the house through the winter? NEW JERSEY.

ANSWER.—The best thing is to take a frame of sealed honey, even if you have to take it from some full colony, lift the frame out of the observatory hive, put in the frame of honey, and carefully brush the bees onto it. If such a comb is not available, perhaps Scholz or Good candy can be used. Take a very little best extracted honey, heat it (be sure not to burn it), stir in all the pulverized sugar it will take, then put it on a board and knead in what more sugar you can, making a very stiff dough. Put this candy on top of the frame, or anywhere in the hive where the bees can get at it.

◆

Rearing Queens—Manipulating Supers and Covers—Queenless Colony—Shaken Swarms—Entrance in Winter.

1. If a colony of black bees that are queenless are given a frame of brood from a colony of Italians, will the blacks rear an Italian queen?

2. How do you manipulate supers and covers to avoid killing bees?

3. How can one tell when a colony is queenless, or is going to swarm, without examining the frames?

4. Do you wait until a colony starts queen-cells before making shaken swarms?

5. How wide an entrance should bees have during cold weather if wintered on summer stands, well protected from north and west winds? VIRGINIA.

ANSWERS.—1. Yes, you can't tell any difference between a queen reared by a black colony and one reared by an Italian colony, provided the egg is laid by the same queen.

2. About the only thing I can tell you is not to set squarely down a cover or super, but to "play" it down, if I may use the expression. Whether it be a cover or a super, set one end on the hive, then play on the other end, first letting it go down within 2 or 3 inches of its resting-place, then raise it an inch or so, then lower it till it is an inch or so above the hive, raise it an inch or so again, then let it go closer down than before, and keep on letting it go closer each time till you let it down entirely. Each time you let it down a little it will squeeze some of the bees enough so they will get out of the way, and when you finally let it down there will be no bees in the way. It sounds long in the telling; but it is really done very quickly.

3. I can't.

4. Yes, I always do; because, all things considered, that suits best in my case; but in some cases it might be advisable to make a wholesale business of it and shake all as soon as the first make preparations for swarming.

5. Depends somewhat on strength of colony and depth of entrance. A strong colony may have an entrance the whole width of the hive if it is ⅜ deep; and in general the entrance may amount to 3 or 4 square inches, with half that for a weak colony.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get them subscriptions, for which work we offer valuable premiums in nearly every number of this Journal. You can aid much by sending in the names and addresses when writing us on other matters.

Convention Proceedings

THE ST. LOUIS CONVENTION.

Report of the 35th Annual Convention, of the National Bee-Keepers' Association Held at St. Louis, Mo., Sept. 27-30, 1904.

(Continued from page 26.)

The President called upon Prof. Frank Benton to read a paper, which is as follows:

WORK IN APICULTURE AT THE UNITED STATES DEPARTMENT OF AGRICULTURE.

At the meeting of the North American Bee-Keepers' Association, held at Washington, D. C., December 27-29, 1892, Dr. C. V. Riley, then Entomologist of the Department, presented quite a review of what the Department of Agriculture had done, and what he conceived it could do for apiculture. Since it fell to me to prepare all of the data for this article I shall feel at perfect liberty to draw upon it freely in a brief review of what the Department has already done in apiculture. In most instances, however, I shall quote literally from the communication presented under the name of Dr. Riley.

Dr. Riley started out by an allusion to the wisdom of establishing as a part of the government machinery, a Department of Agriculture charged with doing all it can to foster and encourage agriculture in all its branches. He believed that the advisability of this would not be questioned by any one who had made himself familiar with the work of the Department since its organization, first as a mere chair in the Department of the Interior, then a separate Commission, and later a department coordinate with the others, with representation in the Cabinet of the President. He believed, and I think with good reason, that, notwithstanding some things in the administration of this great Department might be better if changed, yet on the whole there exist fewer abuses and abnormal conditions in the Department of Agriculture than in any other of the Departments of the government. The great body of workers connected with the Department are earnestly interested in the branches which they represent, and devote practically all of their energies to the furtherance of the work in hand. It has been my lot to be associated in various capacities with these workers during the past thirteen years, and I have come to appreciate most thoroughly the beneficial character of their work, and their singular devotion to it. I can also easily understand how Dr. Riley remarked in his article that "some of the most beneficent and far-reaching work of the Department was done during its earlier history, when its means were limited, and when the field was fresh, and the opportunities relatively greater." He then proceeds to state that: "It has been the desire of almost everyone who has been at the head of the Department to pursue a broad and liberal policy to the end that all the branches of rural economy might receive their due share of attention. He states, then, the fact that must be apparent at once to all, namely, that, "The head of the Department is, however, helpless without Congressional aid and sympathy, and it has too often happened that investigations which promised valuable results have been abandoned because of the failure of Congress to make the needed appropriations." Then, after an allusion to the direct value of the products of bees, and the far greater value which results to the country through the fertilization of our seed and fruit producing plants, Dr. Riley says:

"Fifteen years ago, when I first accepted a position in the Department, there was provision only for an entomologist without assistants or means for any experimental or field work. During the next four or five years I succeeded in impressing the Commissioner of Agriculture and Congress with a sense of the importance of the work to be done in efforts to counteract the ravages of injurious insects, and the appropriations for both office assistants and field-work increased. But the self-evident advantage of endeavors to protect the farmer from some part of the immense losses occasioned by insects, had to fight its way into recognition. It was not until 1885 that the more important work done in counteracting the ravages of injurious species had sufficiently advanced to justify my giving some attention to apiculture, and the fact that nothing more resulted from the work begun may, to some extent, be laid to the lack of effort on the part of the bee-keepers themselves, i. e., to their failure to take united action, such as would bring home to the head of the Department, and to those in charge of the general appropriations, the needs and just demands of the industry.

"However, that considerable has been done by the Department, and through its agency, for bee-keepers—much more, probably, than most of you are aware of—the published reports of the Department show. These reports, hundreds of thousands of which have been distributed very generally over the land, have surely had their influence in the promulgation of intelligent and humane culture of bees. Beginning about the time of the first edition of Langstroth's celebrated work, or nearly a decade before any bee-periodical had been printed in the English language, the Department reports have from year to year given some notice of progress in bee-culture, statistics of honey and wax production, and on several occasions excellent little treatises on bees and bee management. Notable among these is the article on the nature and habits of the honey-bee, in the report of 1857. I cannot give the name of the author, as only the initials of the Chief Clerk of the Patent Office are attached to it. In 1860, Mr. William Buckisch, of Texas, gave, in an extended article, a review of bee-culture as practiced by Dzierzon and his school. The essay by my old friend, Mrs. Ellen S. Tupper, of Iowa, published in the report of 1865, and covering her theory of bee-keeping, was widely read and frequently quoted, creating much interest in improved methods.

"The introduction of Italian bees into this country is certainly one of the advances in bee-culture which ranks second only to the invention of the frame hive, the honey extractor, and the comb foundation machine. But how many even now know that the Department of Agriculture had anything to do with the matter? Leading text-books on apiculture are silent on this head. The fact is, however, that the first successful importation of Italian bees from their native land to America was made by the Department, and it was almost wholly from this importation that such skillful apiarists as Langstroth, Cary, and Quinby bred and disseminated the race during the early '60's."

It must be remembered of Dr. Riley that he was a man of brilliant conception, and also kept in close touch with popular sentiment and growth in all matters pertaining to agriculture, and that naturally wherever his own field of economic entomology was concerned, he was in the front as to its needs and possibilities. He was not a skilled bee-keeper, nor, in fact, could he ever have been classed as a bee-keeper, but, nevertheless, he had, many years before his connection with the Department, manipulated bees to some extent, and had made some study of methods in apiculture, as well as of the habits of the bees themselves, so that it is not surprising that he was disposed to view favorably, in 1885, the establishing of an apicultural experiment station in connection with the entomological work of the Department. In this he was earnestly supplemented by Mr. N. W. McLain, who was, I believe, an old time acquaintance and an enthusiastic bee-keeper, and who became the first appointee. There was, at the time, no special appropriation for apiculture, nor indeed anything of the kind during the whole of Dr. Riley's administration of the office of entomologist. I mention this to show that all the more credit is due to Dr. Riley in connection with the work then undertaken, and which, though interrupted through lack of funds, he resumed later. The funds to initiate this work, and to continue it for a period, as well as to resume it after the interruption just mentioned, were drawn from the general appropriation for the Division of Entomology, and were diverted by the entomologist himself from the general insect-work to this special purpose in the belief that he was fulfilling both the letter and the spirit of the law which authorized the expenditure of certain sums for the promotion of economic entomology.

Just here I must digress somewhat, lest those familiar with what has been printed on this subject should call me to account for the above statements, by referring to a biographical sketch of Mr. W. K. Morrison, which is found on page 554 of Gleanings in Bee Culture for July 15, 1898. This article was written by Mr. A. I. Root, and submitted by him to Mr. Morrison himself. Mr. Root says, concerning Mr. Morrison:

"While at Washington he became intimately acquainted with Senator Teller, Secretary Rusk, Senator Plumb, and others. As he still held on to his interest in bee-culture, at an opportune time, as it seemed to him, he was permitted to urge that an appropriation of $5,000 be made for the benefit of bee-culture in the United States, and he was successful in securing this appropriation. Prof. Cook took hold of it about a year after the money was given, and I do not know but friend Cook had the credit of it, although Mr. Morrison, if I am correct, was the first mover in the matter, and the one who finally secured the enactment."

When the article was submitted by Mr. Root, to Mr. Morrison, including this paragraph, the latter made as a comment, over his own initials, the following statement:

"Besides myself and the secretary, no one knew. Dr. Tinker was the first to know. Secretary Rusk pledged the Senate committee not to spend money on the study of wild bees, but to put the money to practical purposes. Prof. Riley did not like this. Secretary Rusk also pledged himself in writing that I should be the first appointee."

Nothing can be further from the truth than the statements here made. There was no enactment whatever, nor appropriation of $5,000, nor any other sum for apiculture at the time indicated (1885-87), nor, in fact, was there ever a special appropriation for apiculture previous to the year 1901. The following table taken directly from the records of this department will show that, aside from the appropriation for general work, the only specific appropriations made were in the years 1887 to 1890, when provision was made for experiments in silk culture.

APPROPRIATIONS FOR THE DIVISION OF ENTOMOLOGY.

Year ending June 30	Salaries	General expenses for entomological investigation	Specific appropriation for silk culture
1884	$7900	$20,000	....
1885	7900	20,000	....
1886	7900	25,000	....
1887	7300	15,000	$15,000
1888	7300	20,000	25,000
1889	7300	20,000	30,000
1890	7300	20,000	30,000

It is a manifest injustice also to the memory of Dr. Riley to intimate that he wished to spend the money on the study of wild bees to the neglect of practical apiculture itself. Dr. Riley was eminently a practical man, and the fact that he did divert from the general sum appropriated during a series of years for entomological investigations a certain portion to experimental work in apiculture, is proof of itself that he was disposed in a kindly manner toward this industry, and saw the possible benefits which could result from scientific investigations of problems connected with the industry. I cannot regard as any more felicitous the intimation that the first Republican secretary of agriculture, whose record in other respects is above reproach, should have broken a pledge given in writing.

(Continued next week.)

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I moved 35 colonies about 300 yards by closing the entrances. I plunked them on an old wheelbarrow, jarred them over the gravelstones, placed them in position, opened the entrances at once and got out of the way. I don't think a hundred bees came back out of the lot.

I tried wire-cloth for cleaning sections. It made the wood rough and left the propolis on. A heavy paper well oiled, and fastened around the edges of a hive-cover with strips of wood, is good enough here. The same thing with old newspapers underneath, tacked around the body of a hive, is a good winter protection. Let the warm air bring the bees out, not hot sun on the hive.

Black brood appeared in both States along the Delaware River during the summer. And I think the Alley cure is a master stroke, and a fame winner, judging from the experience I had with it. I tried fresh Italian blood, but it was no help that I could discover. Some of these became the worst cases in the lot.

I don't think queens have anything at all to do with disease. I took queens out of diseased colonies and placed them at once in healthy colonies, and no disease followed. I think the claims made for the Italians in many respects are greatly overrated, except that of gentleness in handling.

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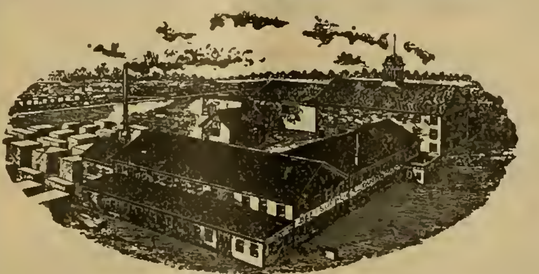

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Bee-keepers, come along with your experience and opinions. Fill up this end of the Journal. Never mind the big guns. We hear them bang all the time. It's the fellow that's *not* doing the same thing in the same old way that we all want to hear from.

A. C. HUNSBERGER.

Northampton Co., Pa., Jan. 9.

Made Little More than a Living.

The bees in this section of Ohio have made little more than a living. My bees have very little care, and therefore can not be expected to do much for their owner. I sell my honey at 15 to 18 cents per section.

The bees had a good flight on Dec. 27, but the next day the thermometer was 14 degrees above zero, so they will stay in for a while now.

HENRY BEST.

Carroll Co., Ohio, Dec. 29.

Open Winter—Moving Bees—Queens Fighting.

I enjoy reading the Bee Journal. I get it every Friday and read it first, and in almost every number I find something that is worth the price of my subscription.

My honey crop was very light last year. I will have to feed some. The winter has been very open. So far the bees have flown almost every day. They were out till almost sundown Dec. 1, 1904, something which is not very common in this locality.

I see a good many inquiries about moving bees. I moved mine about 40 rods last spring and there were very few that went back. I stopped up the entrances with grass, putting

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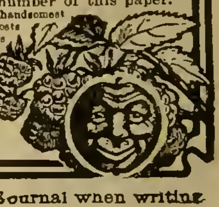

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three hives on a hand-cart at one time, and had little trouble with the exception of one 2-story hive that was full of bees in both stories. In lifting it over, or rather through, a barbed-wire fence the top wire caught the cover of the hive and lifted it off, and the bees got out on my assistant in such a manner that he had to desert me. So that left me with the hive balanced on the fence, the top off, bees boiling out, no smoker, no veil, no help. Well, I had to take my medicine. It was a pretty strong dose, but I finally got them set down. They were slightly jarred in the operation, and I have not had any rheumatism since. Moral: Don't move bees without fastening the hive top and bottom securely.

Have any of the bee-keepers seen two queens fight, or is it such a common thing that it is not mentioned? It is not common to me, so I will try to tell my experience in that line. I got to the bee-yard about 9 o'clock one morning (it is 5 miles from home), and walking across the yard I noticed a few bees fly up. I looked down to see what called so many in one place, and I found one of the queens that I had clipped. I did not know where she came from, so I took her to a hive that I thought to be queenless, and put her on top of the frames. The bees came up and appeared to be glad of her presence. They seemed to feed her and clean her off. I left them for a few minutes, then went back to the hive, and lifting out the frame I supposed she was on, I found her and an inferior black queen about one inch apart, going toward each other. The black was the quicker of the two. She jumped against the yellow queen, knocked her on her side, and stung her.

FRED TYLER.

Mason Co., Ill., Jan. 2.

An Octogenarian's Testimony.

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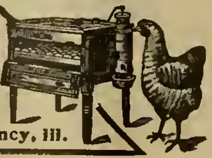

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Bingham invented and patented the first smoker that would go without constant puffing. Bingham invented and patented the first cool handle and curved-smoke discharge smoker. Bingham invented and patented the first clean or soot-burning smoker. Bingham has the only exclusively smoker factory in America. Bingham Smokers made 20 years ago are, some of them, good yet. Bingham invented all there is of value in bee-smokers, and is sure no one has been able to improve on his inventions. We make five sizes alike· except one size all have wide shields, curved central exhaust, cool wire handle. The best cheapest, most durable. Thousands of them have lasted longer than any other make has been on the market.

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Smoke Engine, 4-inch, largest smoker made, $1.50; Doctor, ⅜-inch smaller (3½-inch) $1.10; Conqueror, 3-inch stove, $1.00; Large, 2½-inch, 90c; Wonder, 2-inch, 65c; Heavy copper stoves, 3 larger sizes, extra, each, 5' c. The best, most beautiful, and valuable smokers ever made. They are so good no one but the inventor can make them.

GREENFIELD, ILL., Sept. 29, 1903.
DEAR SIR: After giving the new smoker a fair trial I pronounce it the superior of anything you have made. Just lovely. Perfection itself. W. G. SECOR.

CIRCULAR FREE.
T. F. BINGHAM, Farwell, Michigan.

Please mention Bee Journal when writing.

⁂ PROGRESS ⁂
I publish and recommend to you THE RURAL BEE-KEEPER, the best all-around 50-cent monthly bee-journal in America. On trial 3 months for this ad. with 10 cents. Clubbed with this publication both for one year for $1 25; or send us 25 cents for a 3 months' trial and your name and address on a 2-line rubber stamp; self-inking pad, 25c extra. Or send $1.00 and get The Rural Bee-Keeper and an Untested Italian Queen-Bee. Sample copy free. Agents get liberal terms.
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MAGAZINE, largest, brightest and finest ILLUSTRATED MAGAZINE in the world for 10c a year, to introduce it ONLY. It is bright and up-to-date. Tells all about Southern Home Life. It is full of fine engravings of grand scenery, buildings and famous people. Send at once. 10c a year, postpaid, anywhere in the U.S., Canada and Mexico. Six years, 50c. Or, clubs of 6 names, 50c; 12 for $1. Send us a club. Money back if not delighted. Stamps taken. Cut this out. Send to-day. THE DIXIE HOME,
24A48t No. 75. Birmingham, Alabama.

Please mention Bee Journal when writing advertisers.

no honey from them for the past two years, nor have many in the neighborhood secured any. But I will take the American Bee Journal this year yet. I am nearly 83 years old, but I like to read it. CHRISTIAN BLOUGH.

Somerset Co., Pa., Jan. 30.

Honey Crop Almost a Failure.

The past year's honey crop has been almost a failure. I started with 39 colonies, increased to 41, and secured about 350 pounds of comb honey. The prospect for next year is very poor on account of the severe drouth last fall. My bees are mostly in good condition for winter. JACOB SEIBOLD.

Champaign Co., Ill., Dec. 24.

Doing Well with the Bees.

I have kept bees for two years, and have done very well with them. In 1903 my crop was 289 pounds of comb honey from 3 colonies, and in 1904 I harvested 323 pounds from 7 colonies. The past season was not a very good one in this section of the country.

JOHN L. DICKSON.

Ray Co., Mo., Dec. 26.

Past Season a Record-Breaker—Bee-Stings for Rheumatism.

I began last spring with 5 colonies of bees. I lost 6 last winter from starvation. The season of 1903 was the worst we have had in 22 years, for bees generally get enough to live on and give their keeper about 25 pounds per colony. The past season was our record-breaker, which comes every 12 or 14 years. Everything had honey in it. I think it is because the summer was hot and dry, and the rest of the years were cold and wet. I got 633 pounds of comb honey, and one of my neigh-

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8-frame HIVES, either plain, or bee-way supers, $1.00. No. 1 Sections, $4.00 for 1,000. 24-lb. Shipping-Cases, $13 00 for 100; 12-lb., $8.00 for 100; 20-lb. Danz., $11.00 for 100.
HIVES, SECTIONS, FOUNDATION,
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Bought and sold. Honey-Cans in season. Be sure and get our prices.
OUR MOTTO.
To have everything the bee-keeper needs and to buy his products in return. Correspondence earnestly solicited.
THE GRAHAM-HYDE BEE CO.
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Send for Catalog.
Leahy Mfg. Co., East St. Louis, Ills.
2A16t Please mention the Bee Journal.

CONVENTION NOTICES.

Wisconsin.—The Wisconsin State Bee-Keepers' Association will meet in the Supervisor's Room in the Court House, at Madison, Feb. 1, 2, 1905. All bee-keepers are invited to attend.

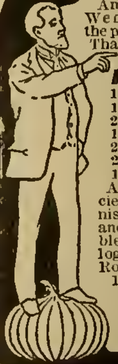
Augusta, Wis. GUS DITTMER, Sec.

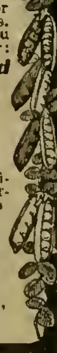
Minnesota and Wisconsin.—The annual meeting of the Southeastern Minnesota and Western Wisconsin Bee-Keepers' Association will be held in the County Commissioner's Room, County Court House, Winona, Minn., on Tuesday and Wednesday, Jan. 24 and 25, 1905, beginning at 10 a.m. on the 24th. If you can, favor us with a paper on any topic pertaining to bee-culture in which you are particularly interested. A free-to-all question-box will be a feature of the meeting.

Fountain City, Wis. JOSEF M. REITZ, Sec.

Michigan.—The Michigan State Bee-Keepers' Association will hold its annual convention Feb. 23d and 24th, at the Eagle Hotel in Grand Rapids. The Eagle Hotel is located at 65 to 71 Market St., cor. of Lewis St., one block south of Monroe St. It will give a rate of $1.50 per day, and furnish a room free for holding the convention. The Michigan State Dairymen's Convention will meet in Grand Rapids at the same time, and advantage may be taken of this fact to secure reduced rates on the railroads. When buying your ticket, ask for a certificate on account of the Dairymen's Convention. The secretary of the Dairymen's Association will sign this certificate which will then enable the holder to buy a return ticket for one-third fare.

W. Z. HUTCHINSON, Pres.





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For 16 Cents Postpaid
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Langstroth on the Honey-Bee
Revised by Dadant—Latest Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the Ameri- The book we mail for $1.20, or club it with the American Bee Journal for one year—both for $2.00; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

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W. M. Gerrish, Epping, N. H., carries a full line of our goods at Catalog prices. Order of him and save the freight.

Engravings For Sale

We are accumulating quite a stock of engravings that have been used in the American Bee Journal. No doubt many of them could be used again by bee-keepers in their local newspapers, on their stationery, or in other ways. Also, if we can sell some of them it would help us to pay for others that we are constantly having made and using in our columns. If there is any of our engravings that any one would like to have, just let us know and we will quote a very low price, postpaid. Address,

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334 Dearborn Street, - CHICAGO, ILL

bors got a little over 1400 pounds from 11 colonies. I now have 11 colonies myself.

I want to give my testimony in favor of bee-stings for rheumatism. Eight years ago I had it about as badly as people generally have it. The first attack I had put me in bed for 5 months, and I had never been rid of it since until last winter, when it left me altogether, and for a year or more I have been free from it.

Last year was hard on bees. They were mad all the time, and there was hardly a day that I did not get stung from one to 20 times, and once while hiving a swarm one of my neighbor's boys pulled 34 stingers out of my face and neck, and my hands and wrists were full, too. I never swelled a bit, but the rheumatism left me.

CHARLES W. HOPSECGER.
Skagit Co., Wash., Dec. 29.

Bees Wintering Well.

Our bees are wintering well. We are having nice weather, and they have a flight about every week.

There is not much demand here for honey. We have quite a lot on hand yet.

Dixon Co., Nebr., Jan. 3. R. CHINN.

Honey-Jars & Honey-Vinegar

We can ship at once on receipt of order, 1-lb. and ¾-lb. Tip-Top Honey-Jars, (octagon shape) at these prices, f.o.b. Chicago:

1-lbs. per 12-doz.crate, $5.00; 3 crates, $13.50.
¾-lbs.per 14-doz.crate, $5.25; 3 crates, 14.00.

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HONEY-VINEGAR

This is a new thing, made by The York Honey Co., and should be used by all who also buy and use honey Furnish it to your home trade. Sample, postpaid, 10 cents, to pay postage and package. A 10-gal. keg for $3.00, f.o.b. Chicago.
Cash with order in all cases. Address,

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Let me SELL or BUY your
HONEY

If you have some to offer, mail sample with lowest price expected, delivered Cincinnati.

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State quantity and kind wanted, and I will quote you price. I do business on the cash basis, in buying or selling.

FULL STOCK OF
BEE-SUPPLIES
THE BEST MADE.

Root's Goods at their factory prices. SEEDS for honey-plants.

C. H. W. WEBER, 2146-48 Central Ave. CINCINNATI, OHIO.

Please mention Bee Journal when writing

Honey and ✣ Beeswax ✣

CHICAGO, Dec. 7.—The market is well supplied with all kinds of honey; the demand is of a light nature. Fancy comb honey brings 14c, but quality as well as appearance is necessary; No. 1 sells at 12½@13c; off grades difficult to move at 1@3c less. Extracted, choice white, 7@7½c; amber, 6@7c, with off grades about 5½c per pound. Beeswax, 30c.
R. A. BURNETT & CO.

NEW YORK, Jan. 9.—The market on comb honey is decidedly dull, and while there is no stock of dark and buckwheat to amount to much, all grades of white honey are plentiful, and for the present we cannot encourage shipments. We quote fancy white at 14c; No. 1 at 13c; No. 2 at 11@12c; buckwheat at 10c. Extracted honey is in fair demand, with abundant supplies and a weakening tendency is noticeable in the market. We quote white at 6@6½c; light amber at 5½@6c; dark, 5@5½c per pound; Southern at 52@55c per gallon. Beeswax, 29c.
HILDRETH & SEGELKEN.

KANSAS CITY, Jan. 9.—The demand for comb honey still continues light, as most of the retail dealers were stocked up on $2.25 honey before the holidays, two cars of which were sold here at that time. We look for a better market in the near future, and quote: Fancy comb, 24-section cases, $2.50; No. 1, $2.25 Extracted, white, per pound, 6@6½c; amber, 5½@6c. Beeswax, No. 1, 28@30c. C. C. CLEMONS & CO.

PHILADELPHIA, Jan. 9.—The market is unchanged from our last quotations, and trading light. We quote: Fancy white, 15@16c; No. 1, 13@14c; amber, 11@12c. Extracted, white, 7@8c; amber, 6@7c. Beeswax, 26c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

BOSTON, Jan. 9.—The market is without change since last writing. The demand continues light, and supply is more than ample. We quote: Fancy white, 16c; A No. 1, 15c; No. 1, 14c, with practically no demand for No. 2. Extracted, from 6@8c, according to quality.
BLAKE, SCOTT & LEE.

CINCINNATI, Dec. 30.—Since our last report was published, the price of extracted honey has advanced, no doubt acting in sympathy with the sugar market. We quote amber extracted in barrels at 6@6½c; white clover, in barrels and cans, 6½@8½c. Fancy comb honey, 13@14c. Beeswax, 28c. THE FRED W. MUTH CO.

ALBANY, N.Y., Dec. 26.—Comb honey is moving off very well considering the heavy receipts and cold weather. Prices not as high as early fall, as usual, but very good yet. Fancy white, 14@15c; No. 1, 13c; mixed, 12@13c. Buckwheat, 11@12c; mixed, 10@11c. Extracted, dark, 6@6½c; light, 6½@7c. Beeswax, 28@30c.
H. R. WRIGHT.

CINCINNATI, O., Dec. 19.—Comb honey is now coming in more freely, and prices if anything have moderated a little. The sales made and prices obtained were for No. 1 fancy water-white comb, 12@13½c; single cases, 14c. Extracted is sold as follows: White clover, in barrels, 6½c; in cans, 7½@8c; amber, in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c.
C. H. W. WEBER

SAN FRANCISCO, Jan. 4.—White comb, 1-lb. sections, 11½@12½c; amber, 9@11c. Extracted white, 6@6½ cents; light amber, 4½@5½c; amber, 3¾@4¼c; dark amber, 3@3½c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

Market is quiet and not noteworthy for strength. Although stocks here and throughout the interior are light, there is little inquiry, either for shipment or on local account. There is strong probability, however, that the spring trade will absorb the light stocks remaining.

HONEY AND BEESWAX
When consigning, buying or selling, consult
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Is what we are making for our customers.
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Fruit Growers' Association, Grand Junction, Colo.
Colorado Honey Producers' Association, Denver—Loveland, Colo.

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Chas. H. Lilly & Co., Seattle, Wash.

LEWIS' GOODS IN UTAH
Fred Foulger & Son, Ogden, Utah

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SEND FOR NEW CATALOG.

PROF. LOUIS H. SCHOLL, (OF TEXAS) will begin a series of articles next week on "Bee-Keeping in the Southwest"

American Bee Journal

OUR TOIL DOTH SWEETEN OTHERS

MASSACHUSETTS AGRICULTURAL COLLEGE.

45th Year. CHICAGO, ILL., JAN. 26, 1905. No. 4.

WEEKLY

"LAKE PHALEN APIARY", AN OUT-APIARY OF H. G. ACKLIN, OF RAMSEY CO., MINN.

FOR 1905.

We are always studying how to improve our goods. That's why we are leaders. No detail is too small for improvement. No expenses are spared to experiment and build new machinery. There are many advantages in buying Root's Goods. You can't get good goods cheaper ; you save freight and time, and you are always sure of the very latest in apiculture. Below are our improvements for 1905.

Honey Extractors

The honey extractors of 1905 have steel stampings in many places where gray iron castings were used formerly. These stampings are so ribbed and braced that the construction of the baskets will be much stiffer than formerly with no possibility of any of the parts breaking.

Wire Imbedder

Our new spur wire imbedder is a great improvement over the old one. Although it costs 20 cents and the old one sells for only 10 cents, it is 10 times better. It does very neat, pretty work and the special construction of the teeth with the groove makes it easy to follow the wire during the process of imbedding.

Perforated Zinc

A complete new set of dies and press have been made during 1904 for turning out perforated zinc, so that our 1905 product will be even better than before.

Smokers

Some minor improvements have been made in our smokers by which the blast will be increased and the general construction throughout stiffened. A very neat and strong brace is placed in such position that the legs supporting the cup or stove can not be twisted or bent out of shape without crushing the whole smoker.

Fences

Some of our fences for the supers will be nailed as well as glued. This will enable the user to clean off the propolis by immersing them in boiling water, a fact which will be appreciated by many.

Root's Automatic Extractor

✣

We have got it at last. An automatic reversible honey-extractor that will reverse the pockets while in motion by simply pressing on a lever. The extractors are no larger than the Cowans, and reverse without bang or slam, provided the directions are followed. They are equipped with street-car band-brake,noiseless gearing, gearing on top of the reel out of the honey, and out of the way of putting in and removing the combs. We have the 4-frame size all ready for delivery. Six-frame, 8-frame, and 2-frame sizes will be ready shortly. Price will be only $2.00 above the regular price for 2, 4, 6, and 8 frame Cowan extractors, respectively.

Wax-Tube

The Van Deusen wax-tube fastener is made of one piece of brass tubing drawn down to a point. It is a much neater and better tool than the one sold last year.

German Wax-Press

The German wax-press is now so improved that it has a threefold use. First, as a wax-rendering device and press to squeeze out slumgum clear of wax. Second, as a press for squeezing honey out of cappings, bits of burr-combs, chunk honey and the like. Third, as an uncapping can for uncapping combs preparatory to extracting. This last feature will prove invaluable because the cappings will drop into the basket, and when the uncapping is done the cappings can be squeezed until they are dry, the honey running out at the spout. Three machines for the price of one. And our price has been reduced to $12.00.

Bee-Veil

Our bee-veil for 1905 will have rubber cord sewed in the bottom edge so that the top as well as the bottom will be elastic. If the directions are followed the edge of the veil can be made bee-tight around the waist or coat, effectually protecting the wearer. We will still furnish veils with silk binding and when called for can supply them.

Cover

The Excelsior cover will look about the same as before except that its construction will be simplified and strengthened, making it better in every way to withstand extremes of hot and dry weather. It will be used on all our hives including the Danzenbaker, as it has stood the test of many years, and for a general purpose cover we know of nothing better.

Ask for our Catalog. A postal brings it.

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THE OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL
Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor. CHICAGO, ILL., JAN. 26, 1905. Vol. XLV.—No. 4.

Editorial Notes and Comments

Lawsuits and the National Association.

The Board of Directors of the National have decided that "in case of litigation hereafter the financial aid extended by the National Bee-Keepers' Association shall not exceed the sum of one-half the expense incurred in such case".

That will allow more attention to adulteration, and possibly the time may not be far distant when something may be done in general advertising of honey. Speed the day!

Selling Small Crops of Honey.

One of the large honey commission dealers once told us that he did not solicit small shipments of honey. He thought that, for various reasons, such could better be disposed of nearer home, and often so advised when they were offered to him.

But we find there are quite a number of bee-keepers who seem to have no little difficulty in selling their honey in their home or near-by market.

Then, again, there are others who could sell more than they can produce, right in their home market. We would like to invite this latter class to tell how they do it. It is not necessary to tell in what particular town you have worked up a good demand for your honey—simply tell *how you do it*. By so doing you will in a measure repay the debt you owe to others who perhaps have aided you with a description of their methods.

There must be many who have been successful in selling their own crops of honey to private families, and at paying prices. Can we not hear from some of them?

Worker-Eggs in Drone-Cells.

In the British Bee Journal G. B. asks: "When worker-eggs are deposited in drone-cells do they develop, and, if so, are the resultant workers as large as drones"? To which that journal replies: "A fertile queen never deposits worker-eggs in drone-cells, therefore, the question about 'resultant workers' can not arise".

Ordinarily neither a fertile queen nor any other kind of a queen lays worker-eggs in drone-cells; but in exceptional cases a queen lays worker-eggs in drone-cells, and from such eggs are developed worker-bees just the same as if the eggs had been laid in worker-cells. A special case may be mentioned: About 30 years ago R. R. Murphy sent to the office of the American Bee Journal a piece of comb containing sealed brood, the comb being unquestionably drone-comb; and notwithstanding the journey through the mail young workers emerged that were not noticeably different in size or otherwise from workers in general.

It has been explained that it sometimes occurs that when a piece of drone-comb happens to come in the middle of the brood-nest of a colony with a vigorous young laying queen, the bees deposit wax on the edges of the cell-walls, making the diameter at the mouth of the cell the same as the diameter of a worker-cell, such cells being then occupied with worker-brood.

Felt for Winter Packing.

This is recommended in Praktischer Wegweiser as being better than straw or moss covering, and no more expensive.

Does White Clover Winter-Kill?

Virgil Weaver asserts in Gleanings in Bee-Culture—apparently endorsed by that paper—that white clover never winter-kills; that in supposed cases of winter-killing the plants die from drouth, such death being in no way affected by the cold. Can it be possible that the general belief is so far out of the way?

Columbus-Comb of Doubtful Utility.

The new foundation with tin-foil base, made in Germany and called "Kolumbuswabe" (Columbus-comb), was heralded as a great acquisition; but reports of success in using it are singularly lacking. Foerster Klauke, in Praktischer Wegweiser, reports having tried a hive filled with the new foundation, also single frames put in the middle of the brood-nest, but the bees made such bad work with it that he concludes by saying that it has only given him something more for the lumber-room.

The Bee-Keepers' Experience Meeting.

Personal experiences are nearly always interesting, and often most profitable. Bee-keepers, we think, are famous, as a rule, for their great unselfishness in the line of imparting freely the results of their work with bees. We dare say there is scarcely another vocation in which so many have been so kind and so generous in this regard. We have often marvelled at it.

And the "experience meeting" must ever be a place of helpfulness, as each contributes to the general fund of information or encouragement. The bee-papers are really places where are recorded the experiences of those who have been keeping bees for a longer or shorter time. Some who arise and speak (or write) as in a bee-keepers' convention, have had a larger and perhaps a more varied experience, hence their ability to impart more information. But taking together all that is written (or printed) in any one issue of a bee-paper, it makes a nice "apicultural meal". And where a bee-keeper takes several of the bee-papers (as all should do if they wish to gain every advantage to be had from bee-literature), he will have several such "square meals" during the month.

Now, as ye have enjoyed and been profited by reading the experiences of others, so should ye contribute your experience in return. No one bee-keeper knows it all. But by each adding a little to the general fund of bee-lore, so will all be helped on to success.

The National Pure Food Bill.

We have received the following, and also a newspaper clipping, from E. Woodall, of Charlevoix Co., Mich., referring to the Pure Food Bill before Congress in Washington:

> Editor York:—I notice the daily press states that the Whiskey Trust has held up the Pure Food Bill which passed the House last session, and is now in the United States Senate on the shelf and no prospects of the Senate taking it up this sitting. Give bee-keepers another jog to write their United States senators, and put it through.
>
> E. Woodall.

The clipping mentioned reads as follows, sent out by the Associated Press:

> Washington, Jan. 9.—Friends of the Pure Food Bill, passed by the House and now pending in the Senate, and especially members of the International Pure Food Congress, believe the whiskey rectifiers of the country have killed the measure so far as the present session is concerned.
>
> It is asserted that a powerful lobby, representing the whiskey rectifiers of the country, who, according to Dr. H. W. Wiley, produce 85 percent of the whiskey drank in America, has been on the ground ever since the session began. The rectifiers oppose the bill because it would compel them to label their product as adulterated whiskey.

Why not all bee-keepers write at once to their senators at Washington, D. C., to take up that Pure Food Bill and pass it during this session of Congress? It ought to be done for the best interest of all the people, for all must eat, and should be assured that they are buying pure food.

Miscellaneous News Items

The First Double Number of the American Bee Journal for 1905 is before you. In it is completed the report of the St. Louis convention of the National Bee-Keepers' Association. It is a rather long report, but will well repay a close reading. Especially is the paper by Mr. Frank Benton very interesting, as it gives a careful, though condensed, review of the work done in the interest of bee-keeping by our National Government. We regretted the necessity of dividing his paper, a part of it appearing in last week's number.

* * *

Geo. A. Ohmert, of Dubuque Co., Iowa, writing us Jan. 10, had this to say:

> I had a $500 fire the other day, burning farm tools and gasoline engine, but it did not burn any bees.
>
> The weather is pretty cold here, being 14 degrees below zero this morning. Bees in the cellar seem to be all right so far.
>
> Geo. A. Ohmert.

The Washington State Association meets in North Yakima, Wash., Feb. 8, 9 and 10, 1905. Among the subjects on the program are the following:

"How to Market Honey"—Isaac Hayes.
"Food Value of Honey as Compared with Other Principal Foods"—Prof. G. L. Tanzer, Analytical Chemist.
"The Value of Bees to the Orchard and the Time to Cut Alfalfa"—W. S. Lawrence, Assistant Botanist of Washington State Agricultural College.
"What We Should Do at Lewis and Clark Fair"—Legh R. Freeman, editor Northwest Farm and Home.
"How to Start an Apiary"—Robert Cissna.
"Profits in Bee-Keeping"—Prof. F. A. Huntley.
"How State Associations Should Buy Supplies"—Ernest R. Root.
"Bee-Keeping in Eastern Washington"—R. W. Keisling.
"The Irrigator's Bees"—Dr. F. S. Hedger.
"History of the Honey-Bee"—Prof. G. A. Balmer.
"The Various Ways of Marketing Honey"—Anson White.
"Washington Bee-Pastures, and How to Maintain Them"—C. Rose.
"Bee-Keeping in Yakima County"—Hiram H. Cole.
"Bee-Keeping in Western Washington"—Thomas Wickersham.
"The Brotherhood of Bee-Keepers"—Rev. J. P. Berg.

Judging from the foregoing list of papers to be read, any bee-keeper in that region that fails to attend will miss a treat. Such a list may also help other bee-keepers' associations when preparing their programs.

* * *

"Bee-Pranks" is the title of a neat 20-page pamphlet just issued by the G. B. Lewis Co. Its preface contains these words: "Compiled from clippings taken from newspapers published all over the United States, and therefore gives as nearly as possible a complete and authentic daily record of common, uncommon, strange and unique happenings in the busy life of the bee during the year just passed". So far as we know it is the only thing of its kind ever published. It certainly is an original piece of work, and attractively gotten up by White's Class Advertising Co., of Chicago. It is mailed for 12 cents in stamps by the G. B. Lewis Co., Watertown, Wis.

* * *

Henry Field, Seedsman, of Shenandoah, Iowa, has sent us his annual catalog for 1905. At the top of the first page it reads: "The seeds that yield are sold by Field". This is also a case where a Field is in the field to sell honest and true-to-name seeds. His specialty is seed-corn, but he has many others. His advertisement appears in another column this week.

Opinions of Some Experts

Which Finished First, Bait-Sections or Sections with Full-Sheet Foundation?

21.—*When bait-combs (that is, unfinished sections of the previous year) are used in a super along with sections filled with foundation, which will be finished first, the baits or the sections with foundation?*

Adrian Getaz (Tenn.)—The baits.

C. H. Dibbern (Ill.)—The bait-sections, every time.

R. L. Taylor (Mich.)—The sections with foundation, as a rule.

Prof. A. J. Cook (Calif.)—Usually there will be little difference.

P. H. Elwood (N. Y.)—With us the baits are usually finished first, unless in the extreme corners of the super.

E. S. Lovesy (Utah)—The bait-sections, at least this is my experience.

Jas. A. Stone (Ill.)—Never had any good results from so doing, so I quit it.

C. P. Dadant (Ill.)—There will not be much difference when they are side by side.

N. E. France (Wis.)—Generally bait-sections, but they will not be as white when finished.

O. O. Poppleton (Fla.)—It is too many years since I produced section honey to remember about this.

Dr. J. P. H. Brown (Ga.)—Work will always be started in the bait-combs first, and they will usually be finished first.

J. M. Hambaugh (Calif.)—This is largely owing to the strength of the colony. The baits will be accepted first, as a rule.

Rev. M. Mahin (Ind.)—I have not had enough experience to speak authoritatively, but I think the bait-sections will be finished first.

Dr. C. C. Miller (Ill.)—Baits, every time, in this locality. Possibly baits might be so objectionable in some way that the bees would prefer the foundation.

G. M. Doolittle (N. Y.)—Depends where baits are placed. If in the center, the baits will be finished first. If baits are in the corners or outside rows, then about alike.

Wm. Rohrig (Ariz.)—I don't know. If I were permitted to guess I should say if the bait-combs were nice clean ones, placed in the center of the super, they would be finished first.

S. T. Pettit (Ont.)—If the bees are on the weak side, nad the flow slack, the bait-sections. If the bees are in good condition, and the flow good, there will be no appreciable difference.

R. C. Aikin (Colo.)—Baits, under unfavorable conditions of strength of colony and flow; foundation first when we have *rousing* colonies, and the nectar just rolls in. Strange, but true.

G. W. Demaree (Ky.)—As far as my observation extends the partly-built combs used as inducers take the lead, at least at the start. As to actual *finish*, my attention has not been called to that point.

L. Stachelhausen (Tex.)—During a slow or moderate honey-flow the bait-combs will be finished first. During a good honey-flow there may be no difference, and sometimes even foundation may be finished first.

Eugene Secor (Iowa)—If honey is coming in slowly the baits will be finished first, and if the crop is short sometimes they will be the only ones finished. If the flow is generous the others will be completed as soon.

E. D. Townsend (Mich.)—Bait-combs, if in the center of the super; if in the corners, as we use them, a few of the cells on the outside lower edge of the bait-section will be unsealed when the rest of the super is ready to come off.

James A. Green (Colo.)—If the honey-flow is moderate, or only ordinarily good, the bait-sections will be finished first. But in a really good honey-flow the sections having full sheets of foundation will usually be finished first.

E. Whitcomb (Nebr.)—I have noticed that the new combs with foundation are usually finished first. The bees do dislike to finish up an old last year's job, and the result is never satisfactory to the customer. I have never thought advisable to put unfinished sections back into the hive. If we can not get finished sections it is better to work for extracted honey.

C. Davenport (Minn.)—It depends upon the strength of the colony, the flow, kind of bees, and where in the super the baits are placed. In a good flow a strong colony that has considerable black or German blood will finish sections filled with foundation as soon as they will baits. Although outside the question, I would like to say that these bait-sections are never first-class comb honey when finished.

Some Facts About Honey and Bees.—This is the subject of an article written by Mr. J. E. Johnson, and published on pages 581-82 of the American Bee Journal for Aug. 25, 1904. We have republished it in 4-page leaflet form for general distribution, and furnish it, postpaid, at 35 cents per 100 copies. Send all orders to the office of the American Bee Journal.

Contributed Special Articles

Airing Cellared Bees—Is It Wise to Do It?

BY DR. C. C. MILLER.

On page 694 (1904), Mr. H. R. Boardman, speaking about bees in winter confinement, says: "I used to open the outside door to admit the fresh, cool air at night to quiet the bees down when they became restless, but I am sure it is a mistake to ventilate in that way. The bees will surely become quiet after admitting the fresh air and lowering the temperature, but they will not stay quiet. It only increases the impulse to rear brood, just the difficulty that already exists".

Mr. Boardman is a man of sane judgment and ripe experience, and his view is apparently endorsed by Mr. Hasty, page 794 (1904). The paper of such a man, with such an endorser, ought readily to pass current as "gilt-edged", and the beginner who cellars his bees might naturally conclude that when a warm spell comes in late winter or early spring it will be unwise for him to open up the cellar, no matter how warm nor how uneasy the bees. Such a conclusion would, I think, be a mistake. Mind you, I don't say I know—I don't know—*I think*. It is clearly one of those things of which our good Afterthinker well says, page 794: "Manifestly it takes time and brains, and close observation, to reach the hardpan of correct practice".

Mr. Boardman winters bees above ground; I below. That may make a difference; and there may be other differences that make a thing right for me and wrong for him; and there still remains the possibility that I may be wrong in my views and in my practice. In any case it will do no harm to tell why I believe and practice as I do.

Throughout most of the winter the temperature in the cellar is higher than that outdoors. Toward the latter part of winter, however, and especially in spring before cellar-wintering is over, there come warm spells, perhaps only a day, possibly several days, when the outdoor air is as warm as that in the cellar. So long as it is colder out than in, the colder air forces its way into the cellar, making the ventilation constant. When the outdoor air becomes as warm as that in the cellar, there is an equilibrium, and ventilation ceases. Under ordinary circumstances, when these warm spells come, the bees become quite uneasy. I formerly thought it was because the bees were too warm, for the bees were quiet in the cellar at 45 degrees, and noisy during those warm spells when the cellar temperature went up to 48 or 50 degrees. I do not think so now......Since writing that last sentence I have been down cellar, and the thermometer there says 54 degrees; outdoors 27 degrees. The bees are quiet; I think they would be more quiet at 45 degrees, but a furnace does not allow that.

The point I wish to make is, that if formerly, in warm spells, the bees were very noisy at 48 or 50 degrees, they ought to be still more uneasy at 54 degrees *if* their uneasiness was caused by the heat of the cellar. On such occasions I opened the cellar wide at dusk; the admission of fresh air only made the bees worse for a time, but by morning they were very quiet. That agrees with Mr. Boardman's testimony so far; but he says they will not stay quiet. I would not like to be too positive in such a matter, but I think they remained quiet until another warm spell. He says: "It only increases the impulse to rear brood, just the difficulty that already exists". What made it already exist? The only condition already existing that could start brood-rearing, so far as I can see, was the excitement from foul air or from warm air. Why should removing either of these conditions make the matter worse?

In my case, however, it was a rare thing for brood-rearing to start before the bees were taken out of the cellar for good, and I think the airing of the cellar did not increase brood-rearing. When a warm spell of several days occurred, if I had left the cellar closed I think the situation would have become intolerable. Conditions must be somewhat different with Mr. Boardman, if at such times his bees remain quiet with all closed.

I would at least advise that beginners who cellar their bees would do a little experimenting before settling down into the belief that the cellar must never be opened for airing while the bees are in it. McHenry Co., Ill.

Old Comb Foundation as Good as New.

BY G. M. DOOLITTLE.

THE old idea that we must have comb foundation that is just off the mills for use in the apiary seems to be springing up again, if I can judge from my correspondence. One wishes to know if it is a fact that such foundation is better than that a year old, or only some one's "think so". And another writes:

"Would you please let me know through the American Bee Journal if it will be just as well to fasten the foundation in the frames and sections during the winter months, while I have plenty of time, as to do the same just before it is needed, using *new* foundation? If the latter, then I must do the work when I am crowded with the bees, just when I can least afford to spare the time. If I could fix things this winter when I have nothing else to do, having everything in readiness when the bee-season opened, I could do the work at a much less cost to me."

During the years which have passed since I began to use comb foundation I have experimented largely in this matter, and have become thoroughly convinced that all talk about old foundation not being as good as new—about how it becomes hard and dry so that it can not be easily worked by the bees—is a fallacy. To be sure, on these cold, wintry days all foundation does look hard and dry and anything but inviting to the bees, or to myself either; but just wait till some hot day in June or July and then go up to the upper room of your building, where it is stored away, or where the frames are filled with it; yea, open up your surplus arrangement of sections and take a look at it, and if it is not too soft and pliable to handle easily, then your storeroom and your experience will be different from mine.

Why I have alluded to an upper room or attic is this: Cold foundation has a whitish, hard appearance, while foundation in a heat of 100 degrees, Fahr., has a yellow, oily appearance, and when it appears thus it is pliable to handle and inviting to the bees. Now take a piece of foundation fresh from the mill, and take it into the cold room, and you will at once say this new is more acceptable to the bees than a like amount of foundation which is from one to three years old, with which you are making a comparison. But take the same new piece into the attic on a hot July day, and hold it by the side of the old, and you will conclude at once that both are alike inviting to the bees.

Again, take the old on some cool day in June, when it looks so uninviting, and lower a frame filled with it down into the center of the brood-nest. Leave it five minutes, then go with a piece of that fresh from the mill (or as fresh as can possibly be to the one who buys his foundation), open the hive and lift out the frame you set in a few minutes before, when, presto! the old and the new have become alike again, and the bees have already begun to manipulate that which is in the frame.

In other words, when placed in the hive the foundation assumes the same yellow, oily, soft, pliable nature after a minute or two that it has in the attic, or when first leaving the mill. And if this is a fact, which, from all of my experiments I know it to be, will any one tell me why it is not just as acceptable to the bees as that fresh and new from the mill? Under these conditions no one can tell the new from the old when the different pieces have been shuffled together, unless some special mark has been placed on one of them.

To show that I am not writing one thing while practicing another, allow me to say that *all* the foundation used in both sections and frames in my apiary during the past 15 years was placed where it is to be used by the bees during the months of December, January, February and March, and both the supers of sections and the hives of frames so filled are stored away for use when the hurry of the summer's work with the bees is on. In this way I have all in readiness, at the "ends of my fingers", for use just when they are needed, so that there need not be even an hour's delay.

This matter of old foundation not being as good as new, is like many another matter which has been started without due consideration being paid to it; and, being once started, it keeps on its rounds through the papers and on mortal lips, going around and around, as on an endless chain year after year, decade after decade; bobbing up its head again after a quarter of a century has passed, till nearly all the world thinks it *must be a fact.*

PROVE FACTS FOR YOURSELF.

And now, Mr. Editor, with your permission I wish to say a word or two about taking what any one says or writes as an *established fact.* I am not against any or all heeding what is said or written sufficiently to experiment thereon, for even a theory advanced by some may, and often does, prove a reality when put in practice by others. But no man or woman should be only an imitator of some one else. Set your *own* mind at work, and it will prove to *your own self* what is right and what is wrong, if you will let your hands obey its teachings by way of doing a little experimenting on a small scale.

Don't depend upon what Messrs. Dadant, Townsend, York, Root, Hutchinson, Doolittle, or any one else tells you unless it is right in line with what you want, and proves as they say under *your own* manipulation. If you want something different from what they do, please tell me what there is to hinder *you own self* trying what you want, and then if it proves, after trial, to be just the thing for *you*, tell the world about it so that Dr. Miller, Hasty, Doolittle, etc., can take advantage of your experiments as you have been taking advantage of theirs, and thus shall come a *mutual* benefit to the whole fraternity.

Dadant would never have been a Dadant had he been like a Doolittle, nor a Townsend a Townsend, nor a Dr. Miller a Dr. Miller. Don't be afraid of a little experimenting on *your* part; only take my advice and not go in too heavy at first. Two or three colonies are enough for the first trial, and if such a small experiment tells you you are on the right track, then use more until the thing is proven; when, after that, you can safely devote the whole apiary to the matter. It is needless to sacrifice a *whole* apiary to any single experiment, as some seem prone to think they must if they experiment at all. Onondaga Co., N. Y.

No. 2.—What is the Best Bee-Hive?

BY ALLEN LATHAM.

(Concluded from page 38.)

THAT the crosswise frame and the closed-end frame should not find favor in Texas or any other locality where the winter is not a serious item should not hold the attention a minute. We, in the North, have another problem on our hands altogether. We have a long, cold winter followed by a lingering spring, and not infrequently we have raw, chilly days in the summer months. The average bee-keeper perhaps gives too little heed to this matter of conserving the heat of the colony, to planning a hive which will meet the needs of the bee as well as those of the bee-keeper. In prosperous seasons bees will give good returns in any sort of rattle-trap of a hive, and in mild winters they get along well, though their keeper (?) has done little to further their comfort. But the bad season comes when only the best colonies pay for their salt, the cold winter falls when only the best-kept colonies see the next summer. It is for such that we must plan.

Does the hive that you keep meet with these requirements? Did your bees winter well last winter? Do you succeed in getting a surplus in the poor season? If you can answer yes with satisfaction then you perhaps will not be interested to better your hive, but if you do not answer yes then study the hive you use.

In a spring free from cold spells, and through a summer of prosperity a hive with its free-hanging, lengthwise frames will beyond doubt hold its own with one in which the frames are closed-end and crosswise. It is during the winter and the spring that the great superiority of such frames becomes apparent.

Think for a moment of the bees on a free-hanging, lengthwise frame in winter. The ends all come to the entrance, and the cold wind is free to go up along the sides of every layer of bees as they lie between the combs. Each inter-comb space is a part of the united interior of the hive. Now consider the closed-end frame. In this case each inter-comb space is a space by itself, which communicates with the rest of the space of the hive only below and through the pop-holes along the edges of the comb. Now set this frame crosswise. Only the first comb is next to the entrance, and any wind to get about the cluster of bees must turn an angle of 90 degrees. It will not do this, because in order for it to go up it must displace air already there. This it can not do, for there is not a chance for that air to move to get out of the way.

I give my hives ample entrance in winter, for I know that they have, as it were, a storm-door between them and outside. The spaces between the bottom-bars become inside entrances through which a good circulation is going on, but through which no cold, death-dealing winds will mount.

It is to be observed, further, that the free-hanging frames furnish a hive which is the same size throughout the winter, so that the weakened colony in early spring has the same big, cold quarters which the strong colony occupied in the fall. The closed-end, crosswise frame does not work on this principle. It is only so large a hive as the colony is large, for it is small for the small colony and large for the large colony. Each comb is a wall shutting off any space which the colony does not occupy. Extremely weak colonies will build up rapidly in spring in these hives. One season might easily pay for a change of hives in this way alone.

For cellar-wintering one style of frame is probably about as good as another, but after the bees are put out in spring the advantages would be with the crosswise frame. I should therefore assume that in general in the North the use of the frame which I advocate would be most advantageous.

It is only fair to acknowledge that my use of the frame does not cover any great length of time, only three seasons, and it is quite possible that a long use of the same may disclose objections which I do not now see. As the case now stands I see no objections which come anywhere near offsetting the manifest advantages; and I am confident that a fair trial will win many converts to this style of frame. The satisfaction of strong and vigorous colonies in the spring is worth the trial. New London Co., Conn.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

ITALIANS VS. BLACKS AGAINST FOUL BROOD.

I can readily imagine that energetic bees will make a much better flight against foul brood than would a strain of bees lacking in energy. I'm not quite so ready to set it down that Italians resist better than blacks, if a good strain of blacks is chosen. Still it may be so. The *tactics* of the two races are radically different. The German race is greatly inclined to make a panacea of simple waiting till the conditions of Nature improve; and therefore they do not wear their lives out in vain as badly as Italians often do. Italians incline to struggle under almost all circumstances. It happens, of course, that waiting for foul brood to improve is a sort of tactics that won't work at all—might as well wait for your house a-fire to go out. Maybe Italians perceive this better than the blacks do, or, if not, their natural disposition to struggle comes in play better. Pages 819 and 829.

INSUFFICIENT AND POOR STORES CAUSE OF WINTER BEE-LOSSES.

L. M. Gulder sized up last winter's great mortality just right when he said, "First, insufficient stores, and second, poor stores". I need not go outside my own yard for examples in evidence. And perhaps this sentence deserves more reflection than it is liable to get: "The basswood honey is gathered only to a limited extent from the blossoms, by far the greater quantity coming from the secretion of the leaves, or, in other words, basswood honey-dew". Wonder if that isn't what is the matter with my basswood honey this last season—too much flavor, and the flavor not as good as it should be. The taste alone, unconfirmed by observations, should not be accepted as proving this, however. I think a plant usually pours in about the same amount of flavoring, whether the nectar-secretion is small or great—that is, scant secretion pretty sure to be strongly flavored, and profuse secretion pretty sure to be lightly flavored. This law comes in splendidly for plants which have disagreeable flavors. When the secretion is profuse enough their honey will be good. Same in regard to coloring matter; scant honey sure to be dark honey, and *vice versa*. Page 821.

REMOVING BEE-STINGS WHEN STUNG.

We have again, on page 822, directions for the proper removal of a sting when we get one. I think I can add a suggestion of considerable value, which is for the most part strangely forgotten. It's all right to avoid taking hold of a sting with thumb and finger; it's all right to avoid pressing on it; it's all right to lift it deftly out with the blade of a sharp knife; *but not if extra time is consumed thereby.* Even one second gained in time is of more importance than any variation of the manipulation. A sting is a self-acting squirt-gun in action, and very soon pretty much the entire charge of poison will be driven in; after which all your wise "chenanigan" in removal comes too late. Have it out instantly—in the best way, if that's available, but in the worst way if you must. A large share of the stings which bee-keepers get come when one or both hands are fast. Place the wounded part against the best thing available, and with a rub forcible enough to be sure to take it out the first time, rub it out.

COMB-HONEY STORY DENIAL ON SECTIONS.

Nice question to decide about, that denial printed on the section. Denial of a bad story about a lady should not be printed on her cheek—else lots of folks will thereby get it for the first time, and adhere to it—and some will view such strenuosity of denial as *evidence of guilt.* If nearly every one already has heard the manufactured-honey story, and already has an opinion about it, a printed denial on every section may perhaps be our best resource. On the whole, I rather think it is, although it will make *some people* believe the lie more firmly than ever. Page 822.

YELLOW JACKET AND WASP STINGS VS. BEE-STINGS.

Where Wm. M. Whitney says that the sting of the yellow jacket is more virulent than that of the bee, he is on the track of the truth, but hasn't quite captured it yet, it seems to me. I think that the exact facts are that the two poisons are much more materially different than usually supposed, so much so that immunization against either one doesn't count much against the other. I have often noticed this in my own person. I am now tolerably well immunized against bee-stings. Before I was immunized I dreaded bee-stings more than I dreaded wasp-stings. Now wasp-stings affect me much the worse of the two—but perhaps not quite so badly as they originally did. And I think a man *could be* immunized against wasp-stings and not against bee-stings. Then he would dread bee-stings and regard wasp-stings with semi-indifference. Page 830.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to Dr. C. C. Miller, Marengo, Ill.

Making Supers and Hives—Hiving Swarms on Foundation

1. I am going to make 600 or 800 supers for comb honey. What style would you advise me to make? I expect to buy the separators. What size section and style of fence? I am pretty well satisfied with the T super with fences. Do you think I can do better?

2. I am thinking of making one or two hundred hives as follows: The body the same as the dovetailed except that the sides will be of 3/8 lumber. Will make a honey-board for over the frames, and make a deep cover, or cover with rim as deep as the hive-body. Top of cover flat, covered with paper. By making this cover of 3/8-inch material the whole hive will not cost me any more than a regular dovetailed hive, and I figure that it would be very much superior in the way of spring protection, warm supers, etc. Am I right? Do you think such a hive with an additional rim and padded sticks around the bottom, and 4 inches of chaff over the bees, would winter bees well outdoors? You see, I want something that would winter bees outdoors on a pinch, but wherever possible I would winter them in the cellar.

3. Do you advise hiving swarms on starters for comb honey?

New York.

Answers.—1. It isn't the easiest thing in the world to advise about such things. One's market is to be considered, etc. Other things being equal, it is well to get new supers of the same kind as those already on hand. It is doubtful that you can get anything better than the T super, provided you know how to use it correctly. The fence should be the T fence to go with the T super, and should be nailed or fastened together in some way besides mere gluing, unless you prefer plain separators. As to size of section, find out which will bring most in *your* market.

2. On general principles it is a bad thing to make a hive different from all other hives, and I should advise against it unless you feel very sure it will be a great improvement. Even then it is best to go slow, and make a trial on a small scale. If you have never tried such a hive as you contemplate, you can not be at all sure you will like it, and it is not a nice thing to have as many as a hundred unsatisfactory hives reproachfully staring one in the face every time one goes into the apiary. So far as wintering is concerned, your hive ought to be all right, but I have doubts whether you would like it in summer. Boney-boards have been pretty generally discarded.

3. It is so important to have combs of perfectly straight, all-worker comb that it pays to fill the frames entirely full of comb foundation.

Feeding Bees in the Spring.

I have 3 colonies of bees that I am afraid are short of stores, but if they should live until spring, and it gets warm enough so they can fly occasionally, would it be all right to feed them sugar syrup in feeders on top of the frames, a small amount each day, until the flowers bloom? Would it be likely to start robbing? MAINE.

ANSWER.—Instead of feeding a little every day, better give them a good feast, giving it to them warm as possible, so as to get them to take enough to tide them over a considerable space of time. If you give them a little each day when they can fly only occasionally, it keeps them stirred up and makes them fly out at times when they may be chilled and never get back to the hive. If the feed is given so that no robber can get to it except through the entrance of the hive, there ought not to be much danger of robbing, especially if the feed be given well on in the day.

Transferring Bees from a "Log" Hive.

I placed a "log of bees" in the cellar a few days since. I had them cut and hauled in a wagon about one-fourth of a mile. They seemed to be all right. They had been in the tree since July last. I see a large number of dead bees at the bottom of the "gum" since being in the cellar. The log is about 4 feet long with a small opening, and I can see empty comb at the top and no bees there. I can see comb at the bottom and lots of bees. I placed a section of honey at the top, and it was untouched for three days. I placed it at the bottom with the same result thus far. Now, when should I transfer them to a regular Langstroth hive? And how can it be done—in the cellar, and when? IOWA.

ANSWER.—No, don't transfer in the cellar; wait till the bees are busy in fruit-bloom. Perhaps it may be better still to wait till the bees swarm, hiving the swarm in the new hive, then cutting out the combs from the log hive 21 days after swarming.

The Best Hive to Start With.

I will quit business the coming summer and locate on a farm. I have already purchased 6 colonies of bees, but I am not versed sufficiently in the bee-business to know what hive would be best for me to get. I was about to get the Danzenbaker, but since reading the American Bee Journal I see in the answers that you also have hives. Have you any for sale? If so, which would be the best and cheapest to get? How far are you from St. Louis? MISSOURI.

ANSWER.—I have no hives for sale, and have no financial interest in any hive. It is likely that the dovetailed hive would suit you as well as any. It is not so much the hive as the management; and I am sorry to say that sometimes claims are made for a hive of some particular make which are not warranted by the facts, and the inexperienced is led to think that if he only has that hive he'll get the honey. I am not far from 300 miles north of St. Louis, but a hive right for this latitude would probably be all right there.

Sainfoin in Iowa—Getting Bees Out of Full Supers.

1. Will sainfoin grow in northeastern Iowa? If so, is it of any value as pasture for stock? Will it produce much hay, or is it something like sweet clover? If not, will it winter-kill? Would it be any damage to land?

2. What is the best way to get bees out of the supers when removing honey? I removed the cover and then tried to smoke them down. I smoked and smoked, but there were still several hundred in the supers when I took them off. IOWA.

ANSWERS.—1. It grows in Wisconsin and Canada, and most likely it would in northern Iowa. There is no need to fear that it will damage the land. For further information see American Bee Journal for 1904, pages 740, 813, 846, and especially the article by C. P. Dadant, page 790.

2. There are different ways of getting them out. There are times when honey is yielding so abundantly that you can set a super on end on top of the hive and let it stand there till all the bees have run down into the hive; but you must watch closely for the first sign of robbing or you'll have a picnic. If you have only a single super, put it in a tub, cover over with a sheet, and turn the sheet over from time to time. You can use a Porter escape, thus allowing the bees to go down of their own accord. The bees may be partly smoked down, the supers taken off and piled up 5, 10, or more high, and a Miller tent-escape put on top, allowing the bees to go out at their leisure. You will find particulars in the book, "Forty Years Among the Bees". Do not think of trying to smoke all of the bees out of a super while leaving it on the hive. If you must rush them out with smoke, smoke lively for a minute or two, take off the super, close up and set the super on end on top of the hive, then smoke and brush till the bees are all out.

Transferring Queen-Cells.

I understand that after a colony of bees is made queenless they will build several queen-cells on one frame. Now I desire to cut these queen-cells out and insert them on another frame of brood that is to be given to a nucleus. Can this be done? If so, will the nucleus after 48 hours accept these queen-cells? MICHIGAN.

ANSWER.—Instead of building cells only on "one frame", under ordinary circumstances the cells will be on several frames. Yet, if you so desire, you can have them built mostly on one frame. Take a frame containing comb that has been just built, the outer edges containing nothing beyond larvæ just hatched, and you are pretty certain to find nearly all the queen-cells on that frame provided the other combs in the hive are old. About eight or ten days after such a comb has been given to a queenless colony the cells will be ready to cut out, and will be accepted readily by a nucleus that has been queenless as much as 48 hours, or even the half of that time. Fasten the cell on a central part of the comb, where you are sure it will be kept warm by the bees. A good way to fasten it on the comb is to take a hive staple, letting one leg of the staple straddle the cell, the other leg being firmly pushed into the comb. If you haven't a staple, two wire nails will do, each an inch and a fourth to an inch and three-fourths long, each nail thrust in slanting so as to hold the cell between them.

Red Clover Bees—Swarming and Superseding Queens—Making Hives.

1. In a locality where there is an abundance of red clover, would it pay to keep only the red clover bees?

2. How can I get the most increase from one colony of bees?

3. Will bees at any time while rearing brood, if a queen is removed, begin at once to replace her?

4. Will it pay to hive new swarms on full foundation in the frames, that is, foundation as large as the frames the bees are to occupy?

5. How soon after a swarm issues can I put it back where it came from?

6. As I expect to make my own hives, how would it be if I make them out of 1-inch pine or basswood, then inside of the main body leave an inch space all around the hive inside, and pack this space with sawdust; then, for winter, make a frame out of about 2-inch material and put this on the frames above the bees, and fill this 2-inch place with sawdust? Would this make a good hive to winter bees in out-of-doors where the thermometer gets to be 12 to 18 degrees below zero? OHIO.

ANSWERS.—1. Yes, it would be better to have in such a locality bees that will work on red clover than those that will not, for they can do just as good work on other plants as other bees. The right way is to breed from the stock that gives you best returns, red clover or no red clover.

2. That's too long a story to tell here. There is no way that will suit every bee-keeper in every locality. Study up general principles; become thoroughly familiar with what is in the bee books and papers, and you can then tell better than any one else just what will be best for you. For some, natural swarming is best; for some, shaken swarms, increase by nuclei or some other way. You will find several pages devoted to artificial increase in the book, "Forty Years Among the Bees", perhaps more than in any other one book.

3. Yes, although there might be an abnormal case where the bees were slow to recognize their condition.

4. I feel so sure that it pays me that I never have a frame that isn't filled entirely full of foundation.

5. You can put it back whenever you like. If your object is to prevent further swarming, it may be well to wait 24 hours. In general, however, it is better to use plans that do not require the returning of swarms.

6. It may work very well, but it would be well to try a few at first to find out before making a large number. You may also find that it will cost more than to buy the stuff ready to nail together.

A Queen-Bee Free as a Premium.—We are now booking orders for untested Italian queens to be delivered in May or June. This is the premium offer: To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us one new subscription with $1.00 for the Bee Journal a year. Now is a good time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.

Convention Proceedings

THE ST. LOUIS CONVENTION.

Report of the 35th Annual Convention, of the National Bee-Keepers' Association Held at St. Louis, Mo., Sept. 27-30, 1904.

(Continued from page 42.)

WORK IN APICULTURE AT THE UNITED STATES DEPARTMENT OF AGRICULTURE.

It was in 1885 that Dr. Riley secured the establishment of an apicultural station at Aurora, Ill., which was in charge of Mr. N. W. McLain. Experiments were conducted during that year and the two following years, under the direction of the Entomologist. There was good work done during this period notwithstanding the severe criticism of certain jealous writers, and I am disposed to agree in the main with Dr. Riley's statement that "there is probably not one of Mr. McLain's critics who would have done more of real benefit to apiculture during the same period and under the same circumstances." I have but to mention among the recorded experiments those conducted by Mr. McLain to determine whether bees could injure sound fruit or not. The results have been very widely quoted and pointed to as authoritative, and the report has done a great deal to prevent misapprehension between fruit-growers and bee-keepers.

For several years following this the Entomologist felt unable to continue the work, but in 1891 a series of experiments were conducted at the Michigan State Experiment Station by Prof. A. J. Cook, assisted by Mr. J. H. Larrabee, under the general direction of the Entomologist. The arrangement, however, did not prove extremely satisfactory, nor did the work done meet, by reason of originality or decisive results, the special approval of the Entomologist. It was shortly thereafter discontinued when the commissions expired.

Meanwhile it had been Dr. Riley's desire to undertake the securing of the giant bees of India, and he had addressed a letter to me while I was abroad offering me a commission to proceed to India and secure these bees. At that time, however, I had started on my way back to my native land, after an absence of 11 years, and his first communication finally reached me while in New York, having followed me up from my last address in Austria. Owing to technicalities, however, Dr. Riley was unable to secure the authorization to send me on this mission, with which it was his intention to couple certain other work, such as the securing of the caprifig insect (Blastophaga psenes) which was so much needed for the pollenization of the Smyrna figs in California.

Having become intimately acquainted with Dr. Riley's views on all of the subjects, I can positively assert that he was perfectly willing to undertake continuous and progressive experimental work in favor of the apiarian interests of the country, had the funds of the division of Entomology permitted this. But having been blocked in the first work which he designed me to undertake, he lost much of his interest in taking hold of the problem which presented itself, of establishing on a permanent footing a section for apicultural experimentation, especially as my services could be utilized for the time being in the general work of the Division of Entomology, while at the same time such correspondence as came to the department relative to apiculture was turned over to me for attention.

The changes which followed rapidly after this, resulting in the placing of Dr. Riley's first assistant in the position of Entomologist, and the sudden and untimely death of Dr. Riley himself, somewhat changed the status of matters, and it has only been rather gradually that the importance of practical experimental work, and the need of scientific and systematic investigations in apiculture have been sufficiently impressed upon the authorities to result in a more liberal policy toward this industry. Meanwhile, however, records of interest have been accumulating, thousands of letters of inquiry relative to apiculture and apiarian interests in the country have been answered, and many thousand bulletins treating of apiarian management have been sent to all parts of the country, and even many to foreign countries, in response to requests which come daily for information. It might be said that the department has practically, for a number of years, conducted a correspondence school in apiculture, since every inquiry, of whatever nature, received careful attention, and, if it required, a specific answer giving the best information at hand on whatever topic the inquiry covered. Moreover, large numbers of teachers in the normal college of the District of Columbia, and the public schools of the city of Washington, as well as teachers of nature study in other cities, have been furnished with information and specimens of bees for use in their class work, and numerous demonstrations have been made for the benefits of these teachers, as well as frequently for large classes under them, including the class in the normal school who would shortly become teachers in charge of public schools.

Realizing that it is the constant dropping which wears away the stone, I have, during the 13 years I have been connected with the United States Department of Agriculture never permitted to pass unutilized an opportunity to create in the mind of those in authority there a favorable impression concerning the dignity of apiculture as a pursuit, and the needs of the industry in connection with scientific experimentation. With this I have, however, studiously avoided being obtrusive, preferring rather to use patience and perseverance and bide the opportune moment for presenting the claims of our pursuit. All along I have noted a growing interest in the subject at the department, a feeling, in fact, to use the words of many of the scientific gentlemen connected with the experimental work there, that "there is far more in this business of bee culture than we had formerly supposed." They have also remarked that it needed extended scientific investigation as to the zoölogical, botanical and chemical sides of the subject, as well as from the practical bee-keeper's standpoint. At last I have the intense satisfaction of seeing this matter duly appreciated, and the proper steps taken to insure the investigations which we all so much desire.

During the years when no special fund could be devoted to apiculture I still continued to do, largely on my own time and at my own expense, some experimental work, particularly with honey-producing plants, which I tested quite extensively during a series of years, with various foreign races of bees, and in regard to methods in queen-rearing and methods in the successful wintering of bees in the open air. My own apiaries were largely devoted to these experiments, without regard to the evident decrease in the honey-yield which must necessarily result. Queens of various foreign races were reared, and certain crosses produced between these races, and sent to certain state experiment stations and to certain portions of the country, where it seemed desirable to test the particular strain in question. Numerous notes and observations for further use in the work when it should be firmly established, were collected from time to time, and plans for experiments and for observations and study of apicultural conditions in all parts of the country were made. During this period the title borne by myself was that of Investigator in the division of Entomology, and later Assistant Entomologist. Finally, in 1901 these efforts resulted in the setting apart of a special appropriation for apiculture of $2,000, the first and only special appropriation which has been made for this branch. My own title was changed to that of Apicultural Investigator, and my salary, with that of a temporary assistant for a few weeks in the summer, were charged to this fund, which left really but a few hundred dollars for investigations. This small sum was utilized to continue the work already started and to make way for a more permanent organization. Since, however, it was not sufficient for the establishment of a well-equipped apiary, my own personal apiaries were still placed at the service of the Department. Unfortunately, the disposition on the part of legislators seemed to be to make appropriations in the form of a lump sum, rather than specific, so that instead of reaffirming this specific sum, it was absorbed into the general fund of the Division of Entomology in subsequent enactments. The result of this seemed to make it difficult, as there was no mandatory clause regarding the amount to be devoted to apiculture, to secure any definite setting apart for this work, although the theory of a separate section in the Division of Entomology devoted to apiculture, was recognized, and certain light expenses, together with stenographic services, allowed.

This brings us to the opening of the present fiscal year, July 1, 1904. I have quoted from Dr. Riley's article his allusion to the fact that the work which he began so many years before had to be interrupted, and I have also mentioned to what he attributed this, to some extent, namely: "to the lack of effort on the part of bee-keepers themselves, i. e., to their failure to take united action such as would bring home to the head of the Department, and to those in charge of the general appropriations, the needs and just demands of the industry." In this connection I should like to call your attention to the fact that I had strongly recommended to the National Association which met in Albany the year before, i. e., in 1891, some action looking to the development of a separate section or division devoted to apiculture here at the Department, and that a committee was appointed at the Albany convention which made the following recommendations:

1st. That the Section of Apiculture in the Division of Entomology, Department of Agriculture, be raised *to an independent Division.*

2d. That in connection therewith there be an experimental apiary established at Washington, having all the appointments necessary to a first-class Apicultural Experiment Station.

3d. That the apropriation for this Division be sufficiently large so that the work may not be embarrassed for the lack of funds.

Had these recommendations been followed up by the proper influence they might long ago, I believe, have been carried out, but the matter rested in this shape for a long time. However, I should not leave the subject without mentioning the substantial encouragement which has been given to the latest effort for development of apicultural work at the Department, and in the first rank I must allude to the efficient aid and influence given by the active chairman of the Board of Directors of the National Bee-Keepers' Association, Mr. W. F. Marks, of New York; and the able editor of Gleanings in Bee Culture, himself one of the board of directors as well, Mr. E. R. Root, of Ohio; to the worthy President of the National Association, Mr. J. U. Harris, of Colorado; to W. Z. Hutchinson, editor of the Review, and himself a member of the board of directors; to Dr. C. C. Miller, of Illinois, another of the directors, as well as numerous friends who have taken occasion to voice their sentiments with their representatives in Congress to the end that they should support such measures as have been so long recommended and so earnestly striven for during this long period of more than a decade. It is in the end a substantial victory to the apicultural interests of the country, which is not passing but permanent, and whose results I hope will continue and grow long after all who listen to my voice shall have passed away.

Thus, at the date mentioned—July 1, 1904—after long effort and repeated representations to authorities at the Department and legislators themselves of the needs of such general work in entomology, and particularly in the various economic lines grouped under the general subject of entomological investigations, the Division of Entomology was raised to the rank of a bureau, with what is practically a Division of Apiculture. And while the appropriation is still in the form of a lump sum, there is set apart a definite sum for apiculture, which leaves, after the payment of salaries, some $5,000 for experimental work. I have been allowed two assistants, each bearing the title, Special Agent in Apiculture, and one whose title is that of Apicultural Clerk, and in addition to this, stenographic service.

As my first assistant I have been able to secure Mr. John M. Rankin, of Michigan, a student and experimenter in apiculture, with whom many of the members of the National Association are well acquainted, and whose name is familiar to many others in connection with his former work as State Inspector of Apiaries in Michigan, and before that was in charge of the experimental work at the Michigan State Agricultural College. He is a graduate of the institution just named, and a young man of excellent habits from whom we may expect valuable aid in the general work in apiculture at the Department.

As the second assistant, Mr. Leslie Martin, of Tennessee, an enthusiastic student of apiculture, has been engaged. He is still young but has had several years' experience in practical work with bees, and has already shown perseverance and intelligent attention to the subject.

A civil service examination has been held for the position of apicultural clerk, and we may hope an intelligent assistant will soon be appointed to fill this position.

The Department has granted the establishing of a model apiary of 50 colonies, and through competitive bids the contract has been awarded to a bee-keeper in the State of Maryland. The bees have been delivered and will shortly be located in their permanent place at the Arlington Experimental Farm, connected with the Department of Agriculture. This farm is located on the Virginia side of the Potomac River, directly across from the Department grounds. I believe that the location will be fairly isolated, and thus that any particular race we choose to establish there may be bred, with excellent opportunity for preserving its purity. At the outset the new race imported from the Caucasus of Russia will be established in these colonies for a thorough test, and for the purpose of crossing with other types.

THE WORK TO BE UNDERTAKEN.

I shall pass very briefly over this, since my historical review of the development of this as a branch of the work at the United States Department of Agriculture has been rather more extended than I had planned; and furthermore, I prefer that the work we shall undertake, when completed, shall speak for itself, rather than that I should make at the present time many words over mere plans.

The fitting up of a model apiary at the Arlington Experiment Farm, which is under the control of the Department, the building of a bee-house, laboratory, and workshop combined, and getting together of all the necessary implements, hives, queen-rearing outfit, tools, chemicals, etc., for the conduct of experimental work, will necessarily consume a little time. The bees have been purchased in the open market, after bids had been advertised for and received. They have been delivered in good shape, and are now prospering on the wild aster which blooms so abundantly in the latitude of Washington in September and October. This part of our work is, therefore, well under way. We have already taken steps toward the procuring of seeds and roots of certain important foreign honey-producing plants, and have secured the coöperation of the Bureau of Plant Industry at the Department, which is in charge of the introduction of new and valuable forage, seed and fruit crops, as well as the congressional seed distribution, which latter is largely confined to the distribution of vegetable, flower and forage-crop seeds, most of which are already known in this country. The Bureau of Plant Industry will undertake to secure at the suggestion of the Agricultural Investigator, seeds of such important forage and garden crops as have not yet been brought to this country, and which are valuable as honey-producers. We are, therefore, ready to file applications for small quantities of seeds which we shall endeavor to send out with discrimination so as to gain the best results possible with seeds adapted to the region of the applicant. In the aggregate there will be considerable quantities of these seeds, yet anticipating that the demand will also be lively, it is expected that only a small quantity for testing can be sent to individual applicants.

It will be the policy of the Department, in its agricultural work, to coöperate with all State bee-inspectors, whenever any coöperative work is desirable, provided, of course, the sum at the command of the Department for this purpose admits of this. During the first year not a large amount can be turned in this direction, however; but it is to be hoped that in sucessive years the original purchasing and fitting up of a department apiary having been accomplished, there will be more opportunity to undertake a more thorough investigation of all known contagious bee-diseases.

Naturally, many interested in seeing the giant bees of India and the Philippines (Megapis, dorsata and zonata) tested in their native countries, and perhaps in this country also, will inquire what we shall do about this. Some other, more wise in his own view, and desiring to point his finger and poke fun at ye apicultural investigator, will at once reply: "Oh, that is one of his particular hobbies; assuredly he will let everything else go by and fly off in a tangent on this wild bee (goose) chase." But hold, good friend, not so fast. We are trying to keep a weather eye peeled and peer in all directions in order not to allow anything of importance to escape our notice, and in order to be able to estimate at its true worth any possible line of investigation. This being our atttitude, all may rest assured that we shall not let any investigation of the great bees occupy either the whole time nor the whole sum which may be devoted to experimental apicultural work. The matter, is, however, a larger one than the mere getting and testing of these bees for their value as direct honey-producers in the United States. It is in itself sufficiently valuable, from a scientific standpoint, to warrant its being undertaken, for this reason alone, at an opportune time. The comparison of the breeding habits, qualities, structure and general life history of these great bees, will afford much that is instructive, and settle long disputed points that all will be glad to have at rest once for all.

There is a further reason for undertaking to find out what we can concerning the bees of the Philippines, namely the opportunity which would at the same time be afforded for studying the possibilities in practical apicultural work in those rich islands which extend over a thousand miles from north to south, or from Boston, Mass., to Savannah, Ga., on our eastern coast; or from St. Paul to New Orleans, in the Mississippi Valley; or again, from northern Oregon to southern California, in the west, and with all variations of mountain, lake and valley, sea exposure, swamp and jungle. Here is a vast field in which at least it is our duty to study the possibilities, and point out, if possible, the way to success. No step will be taken without careful consideration, but action once decided upon will be pushed with all possible speed and energy. But what will we do? Wait and see, and meanwhile give us your advice.

Numbers of queens of valuable races, and select strains of certain races, are being imported and tested. These include the extremely gentle Caucasian bees from the shores of the Black and Caspian Seas in Russia. Cyprians from the Island of Cyprus, which have proven their prepotent value as crossing material; Dalmatians from the Province of Dalmatia, Austria; Italians from the foot-hills of the Alps, in the extreme nothern part of the Kingdom of Italy, where the most industrious type of this race is to be found; and lastly Carniolans, from the most elevated districts of the Province of Carniola, in Austria, a type which, by reason of its gentleness, excellent wintering qualities, hardiness, and prolificness, has shown itself of great value in this country, especially in comb-honey production. Daughters of these races, and various crosses between them, will be bred for testing, both here and at numerous stations. We are particularly desirous of securing unbiased tests on a sufficiently large scale to enable us to decide the exact value of each of these for any and all parts of this country.

If it is possible it is proposed to test, more fully than has heretofore been done in this country, the employment of artificial heat in the wintering, and more particularly in the rapid breeding up of bees in early spring. It is certain that artificial heat may be successfully employed to produce such results. The question then arises whether it is at a profit or not, in view of the expenditure of means and time required.

It is likewise believed that there is great room for improvement in the hives and accessories concerned in migratory or pastoral bee-keeping, at least as this system has thus far been practical in this country.

Whenever the experiments and field-work here indicated do not fully occupy the time of the experimenters and office force, there is an indefinite amount of additional work which may be followed up, such as, for example, collecting data regarding the apicultural industry in the United States, first as to the principal honey-producing plants of the various regions; second, as to losses of bees by diseases in wintering; third, as to the races of bees now kept, and their relative proportions; fourth, as to the proportion of frame to box hives now in use; and fifth, as to honey production.

On the basis of the data obtained under the first head, that is, regarding honey-producing plants of the country, it is proposed to map on outline maps of the United States the areas of the principal honey-producing plants, and to determine where and what new plants can be disseminated for the purpose of increasing the pasturage of any given section.

There are still some points in the life-histories of insect enemies of honey-bees that should receive attention and clear elucidation.

A card index of apiarian literature is much needed in the office-work to furnish ready reference to everything that has been written on a given topic.

Then, naturally, whatever results may be attained, or whatever information it is desired to make public, will have to be put in the form of bulletins, which will require care and time for their preparation.

In all of this work, whether experimental or office-work, the Apicultural Investigator earnestly hopes for the hearty coöperation of the bee-keepers of the country, and is desirous of receiving from any who have in mind a subject of general interest whatever suggestions such persons may feel disposed to give, and all may rest assured that the most careful consideration will be given to any and all propositions of this nature which may be presented. In this connection the remark of the esteemed Dr. Riley must not be forgotten, but should be held as a prophetic warning, namely: "that the reason that nothing more resulted from the work begun under his auspices in 1885 should, to some extent, be laid to the lack of effort on the part of the bee-keepers themselves, that is, to their failure to be unanimous and hearty in their support of the work."

A few words in closing in regard to the present Chief of the Bureau of Entomology, Dr. L. O. Howard. All of those who have the honor of being acquainted with this gentleman will join me, I am sure, in testifying to his high standing as a scientific investigator, as well as to the genial whole-souled nature of his personality. To those who have not met him I would say, that no man is more widely known among the galaxy of distinguished scientists whose homes are in the Capitol city, and in his line of work no man is more highly esteemed. His work in scientific and economic entomology, and his writings in this line have made him known in every country of the world where there is even the slightest appreciation of the labors of the scientific investigator of insect life. He is not a bee-keeper, but he has come in the course of the years during which we have been associated, to know something of the status of this industry and its needs, and I can assure the members of this organization, and through them the bee-keepers of the country, that he is in hearty sympathy, as was his predecessor, with progressive work in the line of investigation and development of the industry in every part of our country. With greater opportunities in the way of funds than were accorded to Dr. Riley, he is able to authorize more work, and it is due largely to his liberal spirit and his ready acceptance of my own recommendations in every particular, that the industry is now upon so substantial a footing at the Department, and that the outlook for continuous practical and scientific investigation in apiculture is now so excellent.

FRANK BENTON.

SIXTH SESSION.

At 7 o'clock p. m., the President called the convention to order, and also called for discussion on Prof. Benton's paper.

Mr. Hershiser moved, seconded by Mr. Dadant, that the matter of taking such measures and steps as shall continue the governmental apiary in investigations in the interest of apiculture in the United States be referred to the committee on Legislation. [Carried.]

Pres. Harris—We should not give a paper of this sort mere passing notice, for the reason that Prof. Benton himself has done everything that the bee-keepers could ask of him in his official position. There are many things in that paper that are grand and good, and in the best interests of the bee-keepers of America. For instance, the matter of getting honey-plants and scattering the seed throughout the several States that it may be beneficial to all of us who may be bee-keepers; another matter, that of establishing apiaries where they may experiment in the line of getting queens of the best sort, probably getting longer-lived queens, if possible. As we go along we get improvements in every line in life, as you see here at our door, and each and everyone of you should lend your encouragement and your help to the one who is foremost in this work. I know it was only last winter, and the winter before, through his efforts he has got appropriations. Now that he is going to assist not only the United States but other countries in the development of the bee-industry, we should not pass lightly over these matters but look at them from a careful business standpoint, and then after we see we are right go to our representatives in Congress and in the Senate, because you all have influence—the most humble citizen in life has his influence—and by putting forth that influence in a few years we will get into a different channel from what we are at present, and you will all be proud of the fact that you are members of this Association. We will not have to solicit members; they will come and solicit us to join. Up to this time you have had one of the most successful conventions in the history of the Association, and let it go to the world that such papers as have been presented here are doing a world of good for us; it is building up our industry; and let us each and eveyone try to help one another, and when we have done this we have done a good thing for the cause.

Mr. Abbott—I ventured to suggest a little change in a paper yesterday, and I will venture to suggest a little change in another one. When a paper is written in an official capacity it ought to rise above everything of a personal character. It ought to overlook any personal preference that one might have. Now, I don't want to be misunderstood. There is only one weekly bee-journal published in the United States, and I don't own any of it or have any interest in it, but it does as much to aid in building up bee-keeping as any other one institution on the top of God's earth. It has done it under the present management, and I believe it has done it under every management. Mr. Benton in his public paper does not recognize the existence of the American Bee Journal, and I object to that part of the paper, and think that he ought not to make reference to other papers as to the great work they have done, and absolutely ignore the grand old American Bee Journal.

Mr. Root—There is one matter spoken of in that paper, and that was with reference to getting senators and representatives to take hold of any matter connected with the Government. When you desire to get an appropriation one man cannot do it, one bee-journal editor, nor two can do it, there has got to be pressure brought to bear from a good many sources and a good many bee-keepers. I remember when this last appropriation was up for consideration I was asked to write to our Senator at the time, and I did, but that didn't go very far. At that time I didn't have the means at my command to bring it to the notice of the bee-keepers in time to do any good, and the result was that our Ohio senators did nothing to help in this matter, but I have learned since attending this meeting that pressure was brought to bear on some of the senators who did have influence, and some work was done, and it was due to that influence that that appropriation was secured in order that we might secure larger benefit for our National work, and if we wish to enlarge the scope of our National work we ought to take hold of this thing and pull.

Mr. Titoff—I should like to say something to you but I cannot do it as well as I should like to because I am not so well acquainted with your language, as I come from a foreign country. I wish to tender to you my thanks for the attention you gave my paper. I was greatly interested in bee-keeping when I was in my own country. I had been reading all the literature I could find in Russia. I have read many articles in Russian which have been translated into that language from the English, and I was very much interested in the reading about bee-keeping in America. Not only we in Russia but all people know that America is a great country. Americans have gone into every business. I became so much interested in bee-keeping in America that I wanted to come myself to see the Americans. I thought about it more and more, and I finally decided I would come to America and if possible take up practical work in the American apiaries and study American methods. When I left my home and my people I did not know one word of the English language. My Russian friends told me that it was very hard to learn English, but I think with hard work I will be able to understand it sufficiently to earn a living in America. When I came to this country I went to the Root company. Before I came here I was in Switzerland, and I think many of you know Mr. Edward Bertrand. I had a letter of introduction to him from a friend at St. Petersburg, and Mr. Bertrand is acquainted with Mr. Dadant, whose name is well known in Russia, and he gave me a letter of introduction to Mr. Dadant and the Root company. I first came to the Root company and I received from them a very kind welcome, and they said they would give me work and I would improve in the English language, for which I thanked them very much. I have the honor to be the representative of the Russian bee-keepers in the convention here. It will give me great pleasure to write to the Russian journals to give them information as to the methods of bee-keeping in America and to tell them that I have received at the hands of the American bee-keepers very great kindness. In my paper which was read at this convention I thought it would be interesting to American bee-keepers to know about the industry in Russia. The paper is not as good as I could wish but I hope you will excuse me for taking up so much of your time in the reading of it. I thank you very much for your attention.

At this stage Mr. S. Francis of Colorado favored the convention with an instrumental solo.

Mr. Hutchinson—As chairman of the committee on resolutions I beg to report that we have commenced to make poets in our ranks ,and it seems that one has cropped up down in Alabama who has gotten out a little volume as a souvenir edition and has made a nice greeting for the Association in the forepart, and he asks the privilege of presenting each one of the members with a copy, and your committee would recommend they be accepted with the heartiest of thanks .

Mr. Hutchinson—We have a resolution made by Mr. Dadant that this convention assert that no artificial comb-honey has ever been or can be produced; that the only successful adulteration ever made has been of liquid honey out of the comb. The committee believes enough committees have been appointed upon this subject, and that enough has been said to cover this ground, and we would recommend that it be not accepted. We have also a resolution here from Dr. Bohrer, upon the appointment of two persons from each State and the Dominion of Canada who shall organize themselves into a legislative committee. This resolution has already appeared in a previous part of the minutes and your committee recommend the adoption of the resolution. [Carried.]

CAUCASIAN BEES.

"Has any member had any experience with pure Caucasian bees? If so, what are their qualities?"

Prof. Benton—Something more than twenty years ago my attention was called to those bees in Germany; they had been imported there from the Caucasus. There were such varying reports concerning them that I was not very much inclined to test them at that time, especially as I had my hands full with other races of bees, and furthermore those I saw were not very uniform in their markings. The Germans said of them, I think nearly all, that the bees were extremely doubtful; some said they were quite worthless as honey-gatherers, others told about their great disposition to swarm, and so on, and all that disinclined me to take them up. About two years ago I was out at the apiary of Rauchfuss Brothers, near Denver, and they spoke very highly of these bees. They had received some that came directly from the Caucasus. I was led to undertake to get some bees and have been testing them. I find them good honey-gatherers; they are as I noticed in Germany, rather varying in their markings; they look something like Carniolans that have been dipped in water and then dried, giving them a leaden tinged appearance, yet they are easily distinguished, their bodies are smaller than those of the Cyprian and so tractable that anything one desires to do with bees can be done with them without smoke, without any bee-veil, at any time, early or late, whether getting honey or not; they can be brushed from the combs with the bare hand and you can hammer on the entrance and brush the bees from the entrance and do anything with them, no matter if the propolis snaps, no matter if the time of day is undesirable and you have no bees flying after you in the apiary or about your face; they fly through the air in large circles and return; they do not sting. They can be made to sting by pinching. If you bother them in the fall when wet or cold they might occasionally sting you. I have never had any occasion to use any smoke on them at all. Exactly how they are going to compare with other bees as regards their productiveness I am not quite able to say. I should like to hear Mr. Titoff tell us as to them. Some people here find they are great swarmers, perhaps, but that results from being so prolific; they must be kept in larges hives that will give them room to expand and build up.

Mr. Titoff—What Mr. Benton says about those bees is true. I have had my own experience, and I find that the Caucasian bees are better than our common Russian bees. They work early in the morning and late at night; they are very gentle and not cross at all. You can go among them without either veil or smoke. They have only one fault and that is swarming. It is very hard to keep them from that. They make plenty of queen-cells. If you take away the queen-cells today, tomorrow they will make twenty or thirty more. Some people say the Caucasian bees produce honey that is different from that of the common bees.

Mr. Kretchmer—While traveling through Germany last year I encountered two apiarists who had Caucasian bees. They were represented to me as stingless bees; they were in Berlepsch hives; they stung me twice! They were swarming entirely too much, they informed me, which was perhaps due to the smallness of the Berlepsch hives. They had not proven to be profitable. They said they were not gathering as much honey as the Carniolans. The Carniolan predominates in the greater part of Germany, although some very nice Italian bees can be found. The parties who owned these bees did not seem to be very favorably impressed with them. One said he would not continue them another year unless they proved better than he anticipated.

Mr. Titoff—They will rob worse than other bees.

Prof. Benton—That has not been my experience. I have not had a large number of the pure cult but I have not seen that those pure bees were endeavoring to rob, and I had them among other colonies and I would have noted it at once. I have quite a number of Caucasian queens bred to Carniolan and Cyprian drones, and I formed a very favorable opinion of those crosses, and I am disposed to think that Caucasian males will be most excellent as crossing material with the Cyprian bees to modify the temper of the Cyprian and still retain the excellent working qualities. One reason is that the type is much nearer that of the Cyprian, therefore, I think they will coalesce more readily. I do not believe such a race of bees would serve my purpose, but I do believe in this country, where so many bees are kept in the cities and public highways that such a valuable and fairly productive race would have its place and would make bee-keeping popular, and many of the difficulties in connection with people coming to this Association and complaining that their neighbors are interfering with their keeping bees would be done away with in a great measure.

Mr. Miller—Prof. Benton, you know that the cross of the Italian with the common black bee results in making the progeny crosser than either one. In case of crosses with these Caucasian bees, are the crosses in all cases gentler than the blacks or Italians?

Prof. Benton—Yes. I have been crossing Cyprians and Carniolans for the past nineteen years, various crosses starting sometimes with the Cyprian and breeding to the Carniolan drone, and sometimes with the Carniolan and breeding to the Cyprian drone or the Syrians, and I have crossed them back again and it is invariably my experience that the male had the main influence in both the temper and constitution of the worker progeny. I have taken a pure Cyprian and mated it with the Carniolan and I have bees that are much gentler than the Cyprian. The fact that the Caucasians are gentler and are a fine type to coalesce inclines me to believe if we used the Caucasian males we would have better crossing material to use upon the Cyprian than if we used the Carniolan.

Mr. Muth—I would like to know whether the Caucasian bees swarm more than the Carniolan.

Prof. Benton—I can't say. I hardly believe they would under the same circumstances.

Mr. Hyde—I would like to know how they cap honey, and if they are good comb-builders?

Prof. Benton—They are good comb-builders and cap their honey fairly white. People have told me that they were good workers, good gatherers and storers of white honey, but would not work on buckwheat. I cannot believe that if they would work well in the early spring that they would not be in condition to store buckwheat-honey.

Mr. Titoff—I know nothing about crossing bees with the Carniolan or Cyprian, but some of the Russian bee-keepers have crossed Caucasian bees with Russian black bees and they have found that the progeny is more like the pure black or pure Caucasian bees. I cannot answer Mr. Muth's question because I have not had the experience. I think those who have had experience say that the Caucasian bees are greater swarmers than others.

Mr. Kretchmer—Permit me to ask Prof. Benton with regard to the crossing. Isn't it a fact that an Italian queen or a Carniolan queen crossed with a Cyprian drone produces crosser bees than if the reverse were the fact?

Prof. Benton—Certainly. In my experience the Cyprians are the greatest gatherers of honey of any race that I know of, but there are some exceptions to that. If the Cyprian is mated with the Carniolan drone they are more likely still to get more honey than if purely mated, for the simple reason that the constitution is made hardy and the bees do not dwindle in the spring; they have the tongue-length and energy of the Cyprians with the hardy constitution of the Carniolans.

Mr. Whitcomb—For the last twenty years I have been superintendent of the honey show at the Nebraska State Fair, and every single first premium that has been awarded on comb-honey has been on honey put up by hybrid bees.

Prof. Benton—It has been my idea that we should place these Caucasian queens at the State Experimental Station and a few of them in the hands of skillful breeders in different parts of the country where they might be multiplied and put upon the market. In answer to one of the members, I would say, pick out the gentle bees for honey.

QUEEN EXCLUDERS, EXTRACTED HONEY AND SWARMING.

"On 10-frame Langstroth hives shall I use an excluder, not being on the ground in swarming time, for extracted honey?"

Mr. Hyde—I would answer no.

Mr. Andrews—We found in several hundred colonies we put on excluders and it increased the swarming from 50 to 75 percent for extracted honey.

Mr. Holecamp—Did you give plenty of ventilation under the hive?

Mr. Andrews—No.

SWARMING AND BEE-TREES.

"How can you hold a swarm of bees when you select the bee-tree?"

Mr. Dadant—I believe I understand what the gentleman means by the question. He thinks after a swarm has selected a tree that you will not be able to hive it because it will go to that tree. I know that a swarm can select a bee-tree and still be hived and abandon the idea of that bee-tree. We had near our apiary a tree with a hole in it and I saw bees at the hole cleaning it out, and I said there was a swarm in that tree, and there was a swarm out at the apiary and I hived those and never saw bees at the tree afterwards.

Mr. Andrews—Did you put brood in that hive?

Mr. Dadant—No, sir.

Mr. Hall—I have had a number of experiences the same as that of Mr. Dadant, and I am satisfied that they can be collected afterwards if they have a place to go. You can change them from where they have already gone to another place and they will, as a rule, stay where you put them. Under some circumstances they won't at all, but they generally will.

Mr. Reinecke—My experience has been if you put a comb or two of unsealed brood in, it holds them very well.

IMPROVING BEES BY SELECTION.

"Can any one race of bees be improved by so-called judicious selection?"

Prof. Benton—Yes, every race.

Dr. Bohrer—If it has reference to the working qualities I don't know whether they can or not.

Mr. Dadant—I believe we can improve their working qualities.

Prof. Benton—It does not need to be a matter of belief; it has been done with every race.

EXTRACTING UNSEALED HONEY.

"How much more honey can be obtained by extracting before the honey is sealed than if the honey is left in the hives as it ought to be?"

Mr. France—I wish to issue a protest against this idea of extracting unripe honey.

Mr. Putnam—How did Mr. France get his honey sealed this year?

Mr. France—I got it ripened, though it took from the time they gathered it till today, and it is in the hives yet, and it is capped over and the hives are standing three stories high, and they will stay there till spring, and it will be good honey, too.

BOTTOM STARTERS IN SECTIONS.

"How do you put the bottom starter in sections?"

Mr. Abbott—The way you put the top one in.

Dr. Miller—Put it in the same way you put in the top one; put in the bottom one first.

Mr. Hall—I am quite satisfied that I have a better way than Dr. Miller has. I have a Lewis foundation fastener. I don't see why any other machine that has a hot plate could not be adjusted to work the same as the Lewis machine. The Lewis machine is reversible. You can adjust it to put in the starter in three-inch sections or four-and-a-quarter. I take that plate out of the machine to the grinding stone and grind it till it has a sharp-cutting edge on each side, not that the edge is intended to cut but in order when you come to let it pass through the foundation it will pass through as leisurely as possible. In the next place I take the base box off which is just below where the hot plate is. I let that down just enough to make a little more room between the bottom of the section where it is in the machine and where the hot plate comes out. I let that down just as much as I want the bottom starter to be in the section. Then I cut a couple of finger-ways out of the head-block. Sometimes the foundation is inclined to fall away from you when you want to take the section from the machine, and by having the finger-way you can put your finger around and touch it slightly and that will hold it from tumbling away from you. You have got the machine all ready for work. Put the section into the machine, put in the foundation just as if you were going to have a foundation in without any starter at all. After it is stuck then insert the hot plate again, and that sharp edge will pass through the foundation so easily that you will wonder how it is done. That will leave the bottom starter standing there. All you have to do is to pull the section off again and turn it end for end, and put it back again and put the balance in there for the top starter and your work is done.

Dr. Miller—I believe I was the first one that started the bottom starter. One of the advantages of the bottom starter is that you are sure that the bottom of the starter will be in the middle. Another reason is that you are sure the section will be fastened to the bottom. In many cases if the honey is not coming in plentifully, especially towards the close of the season, a section will have a passage-way under it, and that bottom starter prevents everything of that kind. In other words, that bottom starter gives you a section fastened in all round. Before I used bottom starters, very often I had the starter swing clear off and fasten on to the separator, and it took me three or four years to find out why. I hadn't sense enough to know it was that bottom starter that held it there and didn't allow it to swing over the side.

Mr. Johnson—Do you save any foundation?

Dr. Miller—No saving of foundation at all.

Mr. Johnson—Do you make the two ends meet?

Dr. Miller—No, there is a space of one-eighth to a quarter of an inch between the two starters, and one of the first things the bees do is to fasten them together. If you put the foundation down near enough to the bottom so that it is fastened to the bottom it is sure to bulge to one side, and by cutting out enough to put two pieces in, the bees will make it fast at the top and bottom without any bulge or bend.

Dr. Bohrer—How wide do you make the bottom piece?

Dr. Miller—Five-eighths of an inch.

Mr. Gill—In answering the question, "Can you save any foundation?" I think you can by using a bottom starter. You can secure very good combs by using a half-inch or five eighths starter at the bottom, about an inch above, because frequently the bees will commence on that bottom and go up to the center. If a person wants to save foundation he can do it by using the bottom foundation, because the bees will fasten those places together where they meet.

Dr. Miller—The question asked me was. do I save any foundation? I say I don't. You can if you want to.

Prof. Benton—As a matter of fact you really lose by the amount that it takes to fasten the bottom starter.

Mr. Gill—You can secure combs fastened well at the bottom by putting on the starter and pulling it right off again, leaving one-half row of foundation cells there and invert it.

Mr. Hershiser—Dr. Miller, as I understand, says he does not "make both ends meet." I thought he had been a successful bee-keeper! [Laughter.]

Mr. Dadant—Mr. Coppin, of Illinois, has a way of putting in a full sheet of foundation which does away with the trouble in regard to foundation sagging or leaving a space at the bottom. He splits the section in two in the center; lays two sections side by side on the table or four halves, and lays a sheet of foundation upon them and puts the other four halves on top and fastens them together. That gives a full sheet fastened on all four sides. I never saw such honey as that presented by Mr. Coppin, it was so regular.

Prof. Benton—That practice has been followed in England for many years.

Dr. Miller—There is one objection to that, and that is that the outside of the section shows the split, and it is not so good looking a section.

Mr. Root—The method is English now, and very similar to the one described, only that the section has a groove cut almost through lengthwise and the foundation is dropped in between the grooves and the dovetail fastened together. We are selling annually hundreds of thousands of them to the British trade. We don't sell any of them in this country. I know our bee-keepers in this country would not bother with anything of that kind.

Dr. Miller—As a matter of curiosity will you allow me to say when Mr. Root was so small he didn't know anything about sections, we had the same thing in this country. They were made with that groove in the top-bar. That is the first kind of sections we had in this country, and they were a big nuisance.

Mr. Root—It was a square groove and slot around the section.

Mr. Sampson—This is my plan, if you could see it, for cutting the foundation in the section. I fasten the points together in the center, and I have very good results. The sections are always well filled and I never have any trouble.

Mr. Hall—I have tried in a small way by doing the same thing Mr. Root speaks about. Take twenty or thirty sections and place them together and rip them three quarters of the way through the section from end to end, leaving the bottom part of the section under it and putting them together, leaving that groove, but, as he said, they were a regular nuisance. I can put in 2,000 sections the way I do it.

FASTENING SECTIONS IN FRAMES.

Dr. Bohrer—A great many bee-keepers ask me as to what I regard as the best plan of fastening comb foundation in shallow extracting frames. The grooves in most of the frames sent out are very shallow; and there is a wedge that the companies use. What is the best method of fastening comb foundation in shallow frames?

Mr. Hall—Get a common machine oil-can, one that has a good deal of spring in the bottom, put a short snout on it or cut the one off that is already on it. Then have a frame to put the extracting frame into so that there will be a little board just to fit the inside of the frame that will come just half way up or half the depth of the frame, right up to the edge of the groove. You must keep that can filled with a mixture of beeswax, and I put a slight bit of rosin in it to make it a little harder. I put the frame on this other frame, slip the foundation into the little groove, take the little oil-can which is sitting on the foundation fastener to keep it warm. You don't want it too hot because if it is it will melt the foundation, and if it is too cold it will freeze in the nozzle of the can. When you get the foundation into the little groove turn the frame up slightly so that the weight of the foundation will fall into the groove and stay there. Take the can and run down a little drop on the end of the foundation and right down to the bottom. Then tip it the other way and let it run back to cool, and then take it off, and thus continue until it is finished.

Mr. Abbott—We have wedges in all our frames and don't need any oil-can.

Mr. Miller—May I say that it is a matter of locality. Mr. Abbott is entirely right; in proper localities there is nothing better than the wedge; I wouldn't want anything better than the ordinary wedge that is sent out, but other bee-keepers say they do not stay in.

The President appointed the following permanent press committee: J. M. Hambaugh, of California; H. H. Hyde, Texas; James A. Stone, Illinois; Frank Rauchfuss, Colorado; E. S. Lovesy, Utah; Prof. H. A. Surface, Pennsylvania; O. L. Hershiser, New York; J. C. Stewart, Missouri; Frank Benton, Washington, D. C.; E. Whitcomb, Nebraska; E. Secor, Iowa; Dr. G. Bohrer, Kansas; F. W. Muth, Ohio, and J. J. Cosby, Indiana.

REPORT OF COMMITTEE ON CO-OPERATION.

The President called for the report of the committee on honey-organization. Mr. Pressler presented the report as follows:

We, the committee appointed to name the first five directors to form the National Honey Producers' Association, beg to report as follows: Fred. E. Brown, California, chairman; N. E. France, Wisconsin; J. U. Harris, Colorado; W. L. Coggshall, New York, and H. S. Ferry, New York.

Signed: F. E. Brown, H. S. Ferry, E. E. Pressler,
J. Q. Smith, E. S. Lovesy, Committee.

On motion the report was adopted.

COMB OR EXTRACTED HONEY?—HOLY LAND BEES.

"Shall we produce comb or extracted honey?"

Mr. Dadant—Yes, both.

"Give your experience with Holy Land bees."

Mr. Laws—I think this race of bees has been reported as being very cross. I have not found them that way. By judicious treatment they are not so. I think I could find a good many bee-keepers in this audience who will say they are a very quiet race of bees, and they are fine honey-gatherers. They are reported as heavy swarmers. It you give them room enough they will not. The remarks as to the Caucasian bees will very well apply to the Holy Land bees with reference to swarming. I find the objection that has been raised to the Holy Land race of bees has been raised also against the Cyprian bees, and I think those persons who have raised those objections are persons who have not been acquainted with the Holy Land bees. They are fine breeders and they do not breed out of season. In producing comb honey they cap their honey a dark, watery color. They use the least amount of wax of any bee I have seen in the manufacture of their comb. I can pick out a comb of honey that has been built by the Holy Land bees, the capping being so thin and the wax so brittle that it will leave the honey.

Prof. Benton—I would like to ask the gentleman what he calls Holy Land bees? Where do they come from?

Mr. Laws—My importation came about ten years ago from the city of Jerusalem. Since that time there has been another importation. Although I reared 115 daughters from that queen I had to discard her. They came from a sister of Mr. Baldensperger.

Prof. Benton—In regard to the Holy Land bees, it may be remembered that I went to Palestine and Syria, in the year 1880, and remained in that part of the world for several years, and I handled a great many bees in Palestine, and I brought those bees to Germany and also to this country: I pointed out in my work in connection with those bees the fact that southward from Mount Carmel the bees are quite different from those north; and the term "Holy Land" was invented by Mr. D. A. Jones because he thought it would sell the bees, and under the term Holy Land he grouped these two types that are very different, so different they deserve to be called separate races. The first bees that were sold under that name were really hybrid bees, crosses between Syrians and Palestine bees. I insisted on calling those southward from Mount Carmel the Palestine race, and those northward the Syrian race. Confining myself strictly to the race of bees of Palestine I want to speak of some of their qualities which as a race they possess. They are good, industrious bees in a northern climate; they breed out of season and when deprived of their queens are very prone to have laying workers within a very short period, oftentimes before they have time to rear a young queen, and will get all the worker-comb stuck up with brood which is very objectionable. They rear a vast number of queen-cells; I don't know that that in itself is very objectionable, but it inclines one to believe they would swarm very freely, but I think that can be largely overcome. I have found them bad-tempered, all in all, and I prefer to handle pure Cyprian bees to pure Holy Land bees. I have gone on the Island of Cyprus without a bee-veil, or when I had to use a bee-veil, with very little smoke, and I wouldn't attempt to handle either Syrians or Holy Land bees in that way; I couldn't get along with them nearly as well as Cyprians. The bees of Palestine are more nearly like the Egyptians than the Syrians.

"BABY NUCLEI" IN QUEEN REARING.

"Are baby nuclei advisable for the ordinary honey-producer? Should baby nuclei have brood given them or not?"

Dr. Bohrer—In starting up the colony I always put in brood and I never have very much difficulty. Give them a well-matured queen-cell and they will probably hatch in three or four days, and I never had them leave the boxes, or very seldom; if they did they would generally cluster and I would put them back. I got the idea from Mr. Langstroth in the summer of 1864. He had a number of nuclei at that time. These queen-cells were finished up in large colonies and then transferred to these nuclei swarms.

Mr. Gill—Let the honey-producer buy his queens.

Prof. Benton—I would suggest the honey-producers learn how to rear good queens and rear them well. I believe he should avoid the small nuclei entirely. Give them brood and make them pretty good size.

Dr. Miller—Does Mr. Gill buy his queens instead of rearing them himself?

Mr. Gill—I buy all the queens I can't rear from natural cells. Of those that are produced under the swarming impulse, I use all I can, and if I need any queens out of season or any other time I buy them. I produce honey, and I always want a laying queen under every super, and if I haven't got one I buy one.

Dr. Miller—He said that the ordinary honey-producer should not use certain nuclei because he should buy his queens. I want to know whether he buys more queens than he rears himself.

Mr. Gill—That is pretty hard to tell. I bought more queens this year than I made increase. I use all the best selected stock I can from natural cells that are built under the swarming impulse at the swarming season, and what I can't use I throw away. At any other time of the year if I want a good queen I get one from a man whom I know rears good ones. My bees are being worked for comb honey and I have no time to rear them. I bought last year nearly 300 queens, and this year 200. I think a good queen will pay for itself in ten days in a good colony of bees in producing comb honey. I don't aim to make much increase because I am working for comb honey, and I want big swarms, and I don't want any queenless bees. I have orders for queens all the time I use them that way. If you need a queen it is better to buy than to rear; you can't get along without her.

Dr. Miller—In the first place, as to buying queens in certain times of the year, instead of rearing them myself, I don't believe that a queen-breeder can tell better than Mr. Gill what kind of queen is good for the work. I believe if he will breed from his best honey-producing queens he will get a better queen than he will get from the average queen-breeder.

Mr. Gill—I don't buy from the average breeder; I buy from the best.

Mr. Reinecke—My experience has been that it does not do a queen any good to come through the mails. I have had queens from different breeders, and good ones, and I have found some that were no good, and their daughters were excellent, so it shows that it may have hurt them.

Mr. Gill—I must get up in defense of the queen-breeder; that he can and does send a good queen through the mail, because mine come through the mail, and I buy just as good ones as I rear. I am not prepared in the spring, I am not prepared in August, I am not prepared with my cells at that time, and my bees do not furnish them; I buy them, and I just get as good queens as I can rear. I bought 200 queens last year from a man who took them out of his full colonies in the breeding season and there were no better queens in the United States, but they occasioned me $200 damage, and I have only two of them left.

Mr. Root—I would like to answer part of both questions. In regard to these baby nuclei for the average honey-producer, with the state of knowledge about baby nuclei now I do not know that the average honey-producer had better fool very much with them. The first and second years we tried them we did not make them work, but the third year we did. I think what we have done others can do. I told Dr. Miller in answer to a question that he must have brood to make them work, but I have found out they work without as well as with. When we come to know more about these little nuclei I believe Mr.

Gill can rear queens, as a matter of economy. I don't say they are any better. It is hard to say whether those little boxes about 3x4 scattered all around the yard, with just a few bees flying about, will be any good, but they will defend themselves, and those queens will he hatched out there and will be just as good as any other queens. Mr. Gill mentioned one important thing, and that was taking queens out of a strong colony in the height of their egg-laying and sending them through the mails, that it was a bad thing to do. We take these baby nuclei, put perforated zinc over the entrance, and send them out, and there does not seem to be any bad effects coming from it. In regard to the question of whether a man should rear his own queens or buy them, I think it varies a good deal according to the conditions. Some seasons of the year it is better to buy them; there are some seasons of the year that the queens do not suffer in the mails.

Mr. Laws: I want to answer both sections of that question in the affirmative. I think it is protfiable for the honey-producer to rear queens with the baby nuclei; it is the ideal thing; the great trouble is tearing up the full colony. I went into the apiary a little while back and got there just in time to find virgins hatching out; in fact they had been held back in the cells by the bees; there were eighteen hatched out; we had some of those little babies and I rushed to the hive and we got those virgins and put them in those boxes as fast as they would come out. We put those nuclei in the shade, and after awhile carried them out to a new location and I got about all those queens in. A man is not prepared for queen-rearing with large boxes. If he has large boxes it is a great deal of trouble to carry them around, to get the nuclei home, and to stay after he puts them there. With the small boxes he can put them in the shade, and he can take them and scatter them around in the brush anywhere, and after they remain with the queen for a while they behave like a newly hived swarm. As Mr. Root says, one or two bees at the entrance will guard the hive just about as well as a large swarm, and you will find the queens mated shortly afterwards. I have mated 150 queens with the bees of one hive. You will have the cells built by a populous colony, and you can get the queens all reared at the beginning of the season. We want no brood in those nuclei frames. I state this because I have had considerable experience. I think when we get a little more light on the subject you will think as I do.

Mr. Gill—It is not proper perhaps at this time to state why it would not be practicable with me, but when it comes under the head of swarming or shook swarms then I might explain it. Only I shall say this, that the field we operate, with three of us to work with a thousand colonies, is about eight miles wide and twenty miles long, and we see an apiary today and then we don't see it again for six days, so that it would not be practicable for me. Under the heading of increase I will tell why I buy my queens at certain times.

Prof. Benton—I remember getting a colony of Syrian bees from D. A. Jones, of Canada, and I was transferring them from one of their bee-hives, which is a crock or water-jar; we broke it and cut the combs out, and transferred them into frames, and in doing this we found they had cast a swarm and were ready to cast a second, and in every handful of bees I took out I would find four or five queens. I counted 250 well-developed queens that I took out of this colony. The question was, What should I do with them? I made baby nuclei. I got these queens mated in those baby nuclei. That was very well as far as it went. That was the spring of the year. We could take those queens and send them away, and did do so. If we attempted to supply a queen-cell to that nucleus there was all sorts of trouble. My proposition is this : In the long run it would not be profitable. Self-sustaining nuclei that can be fed and bees added to if necessary are valuable nuclei in the long run; they are miniature colonies. They are not for queen-rearing but queen-mating, and having them ready as reserve queens. Those in the long run are more profitable.

Mr. Weber—I commenced it and I found I had perfect success until the robbing time came, and then came the trouble; I couldn't keep the robbers away, and particularly this year. I heard from a party in Texas who had made the same complaint.

Dr. Miller—I would like to ask this question: If one or two hundred queens be mated with the bees of one colony, if they should all go to the dogs afterwards, where is the difference?

Prof. Benton—You want one or two hundred more, and you have trouble to establish all these colonies, which is no small amount of work.

Mr. Laws—Mr. Benton relates that when he pulled out each handful of bees he would find four or five queens, and in the first place he couldn't hold them because they didn't have feed there. In the next place I believe some one raised the objection that they could not hold these bees without honey; that is right, they have to have feed. If you take a frame eight or ten inches by four or five inches and you have one hundred bees it will last those bees for six months and they will increase and keep up their strength to a certain extent in those little boxes.

Mr. Root—This question of robbing I find can be taken care of entirely by feeding out-doors. It keeps all the colonies good-natured. I didn't believe it practicable to feed out-doors until some one reported it was, and then we began doing it. We fed slowly several gallons a day. We fed those baby nuclei. That removes one of the objections. Those baby nuclei run out and they seem to get a little contrary, but by continuous feeding this will be overcome.

SEVENTH SESSION.

On Friday, September 30, at 9 o'clock a. m. the President called the convention to order, after which Mr. Laws, of Texas offered prayer.

Mr. Gill—We have been very profuse in our thanks for everything that has been done for us. I know I was on a little committee and we were thanked, but I believe that the officers of the National have not been thanked, and before I sit down I am going to move that the officers of the National Association be thanked for their efficient services in discharging their duties. There is one National officer who cannot live on votes of thanks and the laborer should be worthy of his hire, and he surely is, and that is the general manager, and I move that the Board of Directors be instructed to devise some means to pay the general manager amply for his splendid work.

Mr. Holekamp—I second that.

Mr. Gill put the motion, which on a vote having been taken, was declared carried.

Mr. Laws moved, seconded by Mr. Holekamp, that a vote of thanks be extended to those who had presented papers before the convention, and also those who had in any way contributed to the entertainment of the members present. [Carried.]

Mr. Stewart moved, seconded by Mr. Laws, that a vote of thanks be extended to the managers of the Christian Endeavor hotel who had placed the use of the Auditorium at the disposal of the convention. [Carried.]

Pres. Harris—I wish to introduce Mr. Adams, Mr. F. W. Hall and his little daughter, Miss Annetta Hall. Mr. Adams himself has put forth a great deal of labor in getting up this little souvenir, termed "Honey Fairies." We should in this life be mindful of our duties, and let nothing escape us that would reward them for what they have done for the bee-keepers' convention, and Mr. Adams will in his own way read to you this introductory greeting, and then Mr. Hall and his little girl will give each member one of these souvenirs so that you may take it home with you. I understand that it has cost Mr. Adams considerable to get up this little souvenir, and I know when you take it to your homes you will appreciate his kind work in your interests.

Mr. Adams—I have heard several say this was the greatest National convention that had ever convened. I have heard very many say that this was the largest Fair that has been held in this world. These two events have come together. We look at them together today. In anticipation of this—I knew it would be so—I thought it was fitting we should have something that would bring the two together and make, as we sometimes use the word, an emulsion, and run them together. This is one of the great events in our lives, and a mile-post we will look back to as long as we live, and which we will never forget. You will find my thoughts better set forth in the verses.

The President then called for a song from Mr. and Mrs. York, who responded by singing "The Wheat and the Tares," the words of which were written by a convict in a penitentiary.

At Dr. Miller's request, Mr. and Mrs. York also sang a sacred selection entitled, "Not Ashamed of Jesus."

On motion of Dr. Miller, duly seconded, a hearty vote of thanks was tendered to Mr. Adams and to Mr. Hall and his daughter in connection with the presentation of the souvenirs to the convention.

Mr. Lovesy—I would like to say a word on the organization question. Contemplate the vast multitude of bee-keepers and then consider the little organization that we have. We have not sufficient organization to reap or receive the benefits we might otherwise get. Consider the aid and support we might get from the State Experiment Stations and the Government which we cannot now use because we are not united and not organized so that we can take advantage of those things. There are many things in the United States we could get if we were organized, but which we cannot get without organization.

Mr. Gill—We have had perhaps enough talk about organization, but I wish to say a few words. I think it was Mark Twain who said: "You don't get anything in this world without asking for it, and then you insist on it." In Colorado we have secured the passage of a number of bills with reference to spraying, and other matters, such as a pure honey law; we have insisted on these things. They can be obtained, but it is necessary first to have merit. Human nature is much the same the world over. If you have something with merit in it they will take hold of it irrespective of politics.

Pres. Harris then called upon Mr. Charles Stewart to present a paper on foul brood.

Mr. Stewart—Your general manager asked me to give you a paper on black brood. Perhaps I should say here that according to our New York State authorities black brood is considered a type of foul brood, and we call it by the name of black foul brood now to make a distinction from the old or malignant foul brood.

BLACK FOUL BROOD.

Black foul brood first made its appearance in New York State in Schoharie county, among bees bought from a Southern State, and was at first confined to a small area, but soon alarmed apiarists by the great mortality it caused among bees as well as the rapidity with which it spread.

As a rule the germ of disease affects the larvæ before it is capped, and causes it to have more of a yellow cast than it usually has in a healthy state, causing an unusual motion as if in distress. Later it dies and sinks in a shapeless mass in the bottom of the cell, assuming the color of coffee with a little milk added. It now gives off a sour, disagreeable smell, quite different from the glue-pot smell of ordinary foul brood, and unlike foul brood, refuses to be drawn out in a rubber-like string.

The bees seem to recognize the diseased cells and do not cap them, so that a very large percentage of the brood-capped hatches, although an occasional depressed or perforated capping similar to foul brood may be found. The dead larvæ may readily be removed from the cell after it has dried, differing again from foul brood which attaches itself closely to the cell.

The effect of this disease varies greatly in different apiaries, as well as in its effect on individual colonies in the same apiary. This was hard to explain at first until we learned that it proved most destructive in those colonies weakest in vitality. Further research proved that the average vitality was much lower in some apiaries and hence succumbed more readily, just as a man is more susceptible to disease whose vitality is impaired by overwork, improper nourishment, exposure, or from various causes.

A dearth of honey causes the bees either to overwork, or else suffer from lack of nourishment, thus impairing their vitality, and so succumb more readily to disease. To have disease, the germ of that particular disease must in some way be carried to the hive. How the germs were carried from a diseased apiary to a healthy one four or five miles distant puzzled me greatly until I proved beyond the possibility of a doubt that bees from those diseased apiaries could be found in apiaries at least four miles distant, thus carrying the disease with them. Such being the case with apiaries, how much greater is the mixture of bees from hive to hive in the same apiary. This can best be illustrated by citing the fact that in an apiary with but one badly diseased colony, the colonies on either side of it in the same row will be found diseased, diminishing gradually in the amount of affected brood as we increase the distance from the source of contagion. This also seems to hold good in regard to the hives in the rows both before and behind the badly diseased colony, but to a very much less extent. Black foul brood spreads more rapidly where the hives are close together. The same of course holds good with the spread of disease from yard to yard.

In this paper I have already foreshadowed a method of treatment as follows:

Have apiaries isolated as much as possible.

Do not set colonies too close together.

Keep all colonies strong by having young, vigorous queens rich in vitality. Introduce new blood generously each season, especially that with a dash of Cyprian blood in it.

Shake all diseased colonies on clean frames of comb foundation as soon as discovered, and feed a little sugar syrup for a week to restore their vitality.

If feasible, establish a hospital apiary in some isolated place for the treatment of diseased colonies, from not only your own but also your neighbors' apiaries, moving them at night and treating all at one time, and moving home when cured to give place for a new lot.

By following the foregoing method of treatment with all of its minor details, which cannot here be given, together with a helpful enforcement of a wise foul brood law, a new order of bee-keeping has been brought about in Eastern New York. The box-hive man and the slovenly bee-keeper with his scrub hives and methods has given place to a bright, clean class of bee-keepers, who have a conscious power to succeed even in the face of disease.

This paper, which has been written as I have traveled from apiary to apiary, I feel would be incomplete did I not pay a tribute to those who framed our foul brood law, as well as to the Department of Agriculture, who have made strenuous efforts to carry it out. The bee-keepers of New York State owe much to the wisdom of this law for where once disease blasted men's hopes, and threatened even the loss of their homes, with a legacy of empty hives has arisen fine apiaries where men proudly exhibit their tons of honey.

CHAS. STEWART.

Mr. Holekamp—Is there a difference in this black foul brood from the common foul brood?

Mr. Stewart—The black brood, as I said, appeared in New York State at first and differed materially from the old type of foul brood inasmuch as the brood dies just before it is being capped, and we find very little dead under the capping; while with the black brood the greater percent dies under the capping. Foul brood is stringy and black brood is not, and the smell is different. The spread of the disease also differs; it spreads very rapidly. You will find that it has spread four or five miles away in the course of a few weeks, so that those things mark it as a distinct type of foul brood.

Dr. Bohrer—I would ask if in feeding the bees, after treatment, you add any germicide to the food, such as citric or salicylic acid, or boracic acid?

Mr. Stewart—We have used those things throughout the State and we recommend them to use those if they choose, although we never got any practical results from a germicide fed in syrup. While it seemed to hold it in check we did not want our bee-keepers to rely on that as a cure.

Mr. Cary—I would like to know if the Cyprian bee is more immune from the disease than other bees?

Mr. Stewart—We find that the Italians and some of the newer races of bees will stand the disease much more readily than the old-time blacks. For instance, we find yards where the vitality is very low from some cause, and those yards will become ruined in a single season. I have seen a yard containing 60 colonies of bees with those bees weak in vitality where fifty-nine of them were of this type of bee and one colony of Italians. The whole yard at the end of the season was dead, and the one colony had everything full of honey, and the sections were all filled, I don't know how many sets of them, and they never showed any trace of the disease; and this man being isolated somewhat, and supposing this colony was sure to die with it, let out all the wax in the solar wax extractor, before the bee-inspectors had become organized. The result was that this colony continued about five or six years and it never showed any sign of the disease. I have noticed those bees that had a dash of Cyprian blood in them seemed to ward off the disease much better.

Mr. Cary—Do you mean in comparison with the Italians?

Mr. Stewart—I am comparing them with the ordinary black bees throughout the country. You will find that farmer bee-keepers and some of those called experts have black bees and rather poor hives, and get started with Italians and they drift back and they have rather a poor class of hybrids, and that class of bees succumbs readily to this disease; we have asked all of the bee-keepers where any disease existed to replace them with either Italians or Cyprians, or even Carniolans, in preference to any of the black bees.

Prof. Benton—How do Carniolans in this list compare with others?

Mr. Stewart—We find the Italians will stand disease a little better than the Carniolans, although we have never lost a whole apiary of Carniolans from this disease yet, that I know of. My personal observation would indicate that some particular strains of Italian bees will stand it a little better.

J. C. Stewart—I would like to cite you a case similar to one you have been describing, where you said the larvæ turned from a white to a yellow color. The larva, we will say about two days before it should be capped over, had begun to swell, and had formed a yellow spot on one side of the larva about midway from end to end and in the center of the body, and that spot begins to enlarge and enlarge until it develops in nearly the whole body of the larva, and this body has swollen so that as soon as you touch or puncture it it will burst and give off a watery substance. Do you consider that black brood?

Mr. Stewart—It is pretty hard to recognize the disease from so meagre a description, but I never found that in black brood. I don't know that I ever came across that particular feature. It would look more as if there were some pickled brood about it.

Mr. Whitcomb—You made some remark about your ability to resist disease. Do you believe one colony has any more ability to resist disease than another, or is it on account of the robbing propensities? Some do not go out and rob so much and the hybrid-black bees are always robbing.

Mr. Stewart—At one time we did lean to that idea, but we soon got our minds disabused. Take the instance I have just cited of the sixty colonies. My friend told me they could see that one colony gathering right in that yard and they showed no sign of the disease.

Mr. Whitcomb—Take it from generation to generation, and you put the honey under the microscope, and you will find that the disease is progressing.

Mr. Stewart—If you talk to the bacteriologist you will find that honey is not a medium for the propagation and growth of bacillus alvei.

Dr. Miller—When black brood was first known it was considered a very terrible thing, and at this later date when they have had a chance to fight it I would like to know how they compare it with our foul brood. You would dread the affliction of the ordinary brood, now could you put it into percent as to your dread of your black brood?

Mr. Stewart—It is pretty hard to compare the two because I have had so much more experience with the black brood than with the foul brood. While we occasionally find a little spot of it in New York State I have found foul brood where it has been in a couple of yards to an important extent for four or five years. If you had black brood in a single apiary of New York State it would largely depend on the weather or honey conditions how fast it would spread. It is a disease that thrives best in a starvation season, when no new honey is coming in pure and fresh from the flowers; and the result is that I am a little at a loss to know how to place a percentage on it, but I should a great deal rather have the old-time foul brood than the black brood.

Dr. Miller—Another question. These two diseases, the scientists tell us, come from the same cause, bacillus alvei. One is puzzled to know why, and yet we know that there are different types of the disease. But if they both come from the same cause, do they merge one into the other? Will there be shades of it from one to another, or are they distinct things, neither one ever changing into the other?

Mr. Stewart—We have never known it to change from one to the other. It always preserves these peculiar characteristics of its own.

Pres. Harris—Is it not a fact that in the insect kingdom as well as the animal kingdom, and you take it among the human family, that the conditions surrounding all diseases have a very great deal to do with it? You find it sometimes in a light form, and other times in a severe form, and it is the condition in which the bees are and the surroundings.

Mr. Stewart—Yes, I believe it is.

Mr. Root—There is one fact that has not been brought out. I would like to ask Mr. Stewart whether he has diagnosed samples of black brood that have been sent to him from other portions of the country as the same as the black brood he has in New York State?

Mr. Stewart—I had a sample brought from Michigan that I was at a little loss to know just what it was, while the sample was a little old, something over a week. It is pretty hard to take a little sample of it home and decide just what it is, especially after it has been out of the hive for a week or more, but I didn't hesitate in pronouncing this similar to our black brood in New York State. Your general manager has handed me a paper that was sent in by another inspector from New York State, and perhaps it would be well to read that. The writer is W. D. Wright.

BLACK BROOD (SO CALLED) IN NEW YORK, VS. FOUL BROOD.

Contrary to the result obtained from former investigations and the general belief that the New York bee-malady was an entirely new and distinct disease, the recent extensive investigations by New York State, exhibits are expected to prove that the disease prevailing here, is nearly, if not quite, identical with that described by European authorities as foul brood—bacillus alvei.

There is apparently a variation in the exterior characteristics of the former from the latter, such as a greater proportion of the *unsealed* larvæ dying, consequently fewer sealed cases containing discarded matter, sometimes a black or yellow spot on the larva when first attacked, and only occasionally ropiness. In the advanced stages, either is extremely foul, and emits a nauseating stench. Also, either yields readily to the same treatment.

European bee-masters claim that there are two forms of foul brood, viz.: the dry or mild, and the moist or malignant. From their description, I believe the mild form tallies with what we call pickled brood, and the malignant probably the same as our foul brood or black foul brood.

I have observed for several years past, that the pure, three-banded or leather-colored Italians were much less subject to the disease than other races, so that I universally recommended Italianizing with such strains. If this is done in diseased apiaries of black or hybrid bees, before or soon after treatment, the apiarist will stand a much better chance of banishing, or at least keeping the foul brood in subjection.

I was surprised recently, in referring to Quinby's bee-keeping, edition of 1865, to find this statement in regard to Italian bees being less affected with foul brood. "Since their introductin into my apiaries, the number affected with this disease has diminished five-sixths." Mr. Quinby also states in his description of the disease, that the dead larvæ were *black*. However, a larger proportion of them was sealed over than in our black foul brood.

I will also quote from Dzierzon's mode of treating foul brood, published in the Bienenzeitung. He says:

"To prevent the disease from spreading in a colony, there is no more reliable and efficient process than to stop the production of brood, for where no brood exists, none can perish and putrefy. The disease is thus deprived both of its ailment and its subjects. The healthy brood will mature and emerge in due time, and the putrid matter remaining in a few cells will dry up and be removed by the workers. All this will certainly result from a well-timed removal of the queen from such colonies."

This is recommended by the author when but few colonies are diseased, and those discovered early, but it is good practice even at the present day, and in the treatment of our black foul brood in certain cases, viz.: colonies that we wish to treat by the formalin process, may be unqueened or the queen caged, then after the combs are free from brood, the honey may be extracted, the combs thoroughly fumigated and returned to the bees after they have consumed the honey in their sacs. Also, any colonies that we may wish to brimstone at the end of the season, by removing the queen three or four weeks before the end of the honey-flow we will have no brood in the combs. They could then be extracted, fumigated with formalin and preserved for future use. The best results would be obtained from colonies of fair to good strength, as they would clean up the disease much better than weak ones.

For those who wish to preserve their apiaries as far as possible from the ravages of this disease, and do not wish to use the formalin treatment, the shaking process is recommended, stacking the brood, and shaking the same combs again three weeks later.

In regard to the name of our present malady ,I will say that as everything emanating from bacillus alvei is regarded as foul brood, and a further addition to the title seems to be necessary to identify this particular phase of it, we may call it "black foul brood." Because an error was made in the start in naming it black brood, is no reason why that title should be perpetuated.

The name was also very unfortunate for us when it was given, as it upset and rendered void the New York law as far as the prevailing disease was concerned, and necessitated an amendment at the next session of the legislature. However, we are happy to say that matters are gradually becoming righted.

With careful, progressive apiarists, the outlook at the present time is quite favorable, even in districts where the mortality has been greatest, and the business has been conducted at a good profit. W. D. Wright.

Mr. Root—I would like to make a statement from my knowledge of these two diseases. You perhaps remember about twenty odd years ago we had foul brood at Medina, and we had it very severely, and it was real foul brood; it roped and had all the characteristics, as given in the European journals at the time. Now, this black brood deports itself in a very different way; it is not ropy, has a different odor altogether, is of a watery consistency, and when Mr. Thos. Wm. Cowan, editor of the British Bee Journal, was at our place he examined the foul brood we had there; he had his microscope and looked at the bacillus alvei and said it was exactly the same thing as they had in Europe. Last summer I sent a sample of the foul brood that has been found in our vicinity to the bacteriologists in New York State and after an examination had been made of it a report came back that it was not the same thing as the black brood of New York State. That it was not bacillus alvei. There are some things there that I do not understand. Thos. Wm. Cowan examined the foul brood that I had seen and called it bacillus alvei; these bacteriologists examined that same thing and say it is not the same. I wish in the Department of Agriculture they could investigate that question and have it cleared up; there seems to be a conflict of opinion among authorities.

Mr. Johnson—In the last paper read the suggestion is made of shaking the bees and putting away the comb for three weeks. I would like to ask if it would be safe to use those combs again without purifying or cleansing.

Mr. Stewart—I don't think he wished to convey the meaning that they were to be used again in three weeks, but rather he speaks about stacking the brood and then afterwards when the combs are cleaned out to use formaldehyde on the combs. We cannot be sure of this treatment. In some cases it succeeds, in other cases it fails, perhaps owing to a poor grade of formaldehyde. Our experts have been making some tests of what has been sold on the market and find it is largely adulterated and therefore everybody did not get the same results. In regard to this other treatment we speak of, it is sometimes necessary in order to save the brood of a part of your colonies that are diseased early in the season, while as the honey-flow opens we treat the strong ones and stack the brood on the weak ones, and in perhaps ten days that makes the weak ones strong, and you can shake those and you have bees enough to live and perform the labors of the hive until new brood is hatched.

Prof. Benton—As a comment on what Mr. Root has brought up regarding the taking up of this subject I desire to say, shortly before coming here, I was asked to hand in estimates for the fiscal year for apiarian work beginning July 1, 1905, and in those estimates I included an item of $1,500 for an investigation of these bee-diseases. It rests with you to see that that goes through. If it is received by the committees and congress, and if it passes we will employ a skilled bacteriologist and let him go to work to straighten the whole matter out. But this year, as Dr. Wiley indicated, there must be a united effort to see we get that in addition to our former appropriation.

Mr. Gill—I want to enter a few words of caution to amateurs in this treatment of disease; our work goes out and it is dangerous for amateurs. Experts will do as they have a mind to, and it is safe to let them, but I would advise any amateur attempting any fad in the matter of treatment, when he has doctored his combs to make them into beeswax, and when he has doctored his honey either to burn or destroy it. All the drugs in the hands of amateurs are not a success. When it comes to the treatment by shaking or driving be sure you do it a second time. The proper media for increase of the germs is in the larvae, the germ itself is in the honey, and the danger lies in the honey. Bury it or burn it up. I am speaking for amateurs alone. I have had more experience with foul brood than I hope I will ever have to have again. I have had to treat from 25 to 150 cases every year, but it is getting less. I have apiaries that are entirely clear from it, and remain so, and then in a year or two up comes some of it. You can have all the law and legislation you wish, but we have got to contend with foul brood, the same as the human family must contend with typhoid fever. I believe there are sections of the country on account of the flora, soil, atmosphere or humidity that are more immune from disease than others. I have seen sections where it seemed hard to spread it, and other places you couldn't keep from having it all the time. But it is safe at all times to the amateur to be sure of what he does. If in the fall you have had a bad case, use fire; in the spring, if you have something worth saving, starve them pretty near to death, then put them on clean combs, then when the honey season comes, the best plan is to turn them into clean, new hives, but be sure you know what to do with those old combs; take care of them, and be careful, and you will be rewarded.

Dr. Miller—Prof. Benton tells us it lies with us to secure so and so. Now, he supposes we common, everyday bee-keepers are smart enough to know all about what that means. I would like to have him say distinctly what he wants us to do.

Prof. Benton—What I mean is simply this, that when the Bill which will go before Congress making appropriations for the United States Department of Agriculture has been reported, when it is in the committee's hands, and then later on when it goes to the House and to the Senate for passage, every member should see that both of his Senators and the Representative from his district are touched up by a short letter to the point, stating we are interested in seeing work that affects our pursuit favorably considered by your committee. You need not say, we want ten or twenty thousand dollars, but simply favorably considered; we wish to see our interests represented, and there are measures included in this Bill in which we are vitally interested; will you give them your support? Merely a touch-up of that sort from all over the country, and particularly any member who is a member of the committee on Agriculture, would affect the purpose probably.

Dr. Miller—That is good so far as it goes. We don't know enough about these things we want to do. Would it be asking too much of Prof. Benton if he would, when some bill comes up of that kind, tell us through the bee-papers somewhat distinctly what we are to do?

Prof. Benton—I will do that. There is not only such legislation as that, but sometimes a pure food bill has been before Congress; it is a good thing to have that kept track of, and it is a thing that every bee-keeper is interested in seeing passed, and might influence very largely in matters of that sort. There are sometimes matters affecting the duties on honeys.

Dr. Miller—I think if Prof. Benton will do that it will help very largely.

Mr. Smith—Along this same line, and in view of the fact of the wide-spread of bee-diseases over the country, and the further fact that most of them are due either to carelessness or ignorance, would it not be a good thing to have a little leaflet issued on the prevention of these diseases? If there is none extant I would move we have a lot of them printed for the purpose of parceling out among our members and distributing, and for our local institutes throughout the country for distribution among the farmer bee-keepers.

Mr. Lovesy—In my experience I have noticed a number of times that foul brood has turned to black brood. Just as soon as the bees commence brood-rearing in the spring I go very carefully and look over the brood; pick off the caps of any I have any suspicion of, and I often find the larvæ in there. If that is the case I know it is going to be foul brood, pickled brood, or black brood, or something of that nature. Then we transfer them and put them into a box on the old stand and starve them for three or four days and put them on starters and feed them up. In this connection in regard to foul brood laws, have something which affects you. Don't have a State law. There is no State in the Union that has any law at all that suits the other States. Our law reads that any five men in any county where the disease exists may petition the County Commissioners and they shall appoint and pay the inspector for the time he occupies in his actual duties among the bees; and it provides he shall visit all bees. He is required to visit every apiary once a year. If there is anything wrong with the bees he attends to it, and if any time through the year a bee-keeper suspects anything wrong with the bees he calls on the inspector and the inspector visits them.

Dr. Bohrer—With regard to getting a new queen in such cases I would deem it entirely unnecessary, because the germ of foul brood is found in the food in the stomach of the bee, and so soon as the food has been disposed of and has passed through the system, the queen is no longer liable to transmit that disease to her progeny. I want to recommend to every bee-keeper with reference to foul brood that his cure be radical and permanent.

Mr. France—Bearing on this same line of foul brood, perhaps I am wrong, but I think not, the father of our authority in the United States from a practical standpoint is William McEvoy, of Canada. I went down to New York last winter more especially to meet him in counsel on this subject than any other, but Jack Frost beat me out, and I failed to meet him. I said, "Be at this convention," but when the critical hour came he could not come.

Mr. Reinecke—Could the disease be carried by imported queens?

Mr. France—This is a question of great importance both to queen-breeders and the bee-keeper himself. Is there danger of foul brood by buying queen bees from abroad? Yes, and no? I would not hesitate to buy all the queen-bees a foul-brood apiary had, and introduce them into my hives, provided when they came every queen was taken out of the cage and put into a new, clean cage, and fed sugar syrup forty-eight hours, and then introduced, and then destroy the cage she came in. It is the food that is in the cage, and not the queen.

Mr. Taylor—I think it is fourteen or fifteen years since I first had foul brood, and I have been a good deal interested in it, and have watched it and have not been terribly anxious to get rid of all of it as I like to see what can be done with the thing. At one time I had a good, strong colony of bees that was queenless. I had another colony that had foul brood well developed, and for the purpose of satisfying myself as to whether there was much danger of getting foul brood from a queen, I took the queen out of the foul brood colony and put it directly into the healthy colony. They accepted her at once—I didn't have to cage her—and no foul brood ever developed from that operation, so that I am tolerably well satisfied that the danger of getting foul brood by means of a new queen is extremely slim.

Mr. Laws—I would like to ask Mr. France why he wishes to feed sugar syrup to the queen and bees in the cage for forty-eight hours before he introduces them.

Mr. France—I would rather you would cut that off and not feed the queen and bees, and isolate her from those bees. It is simply to make her first consume what honey she has within her honey-sac, and then give her a good feeding, the same as with farm stock.

Dr. Bohrer—The disease is no part of her system, but simply what she has been eating?

Mr. France—That is all.

Dr. Bohrer—Do you consider salicylic acid as a germicide a valuable thing to feed with the syrup?

Mr. France—I don't know but it would be good, but I have not known any bad results when we didn't use it.

Mr. Darby—I would like to ask if you don't first introduce the queen to a new escort before you do the feeding?

Mr. France—Let her run into a cage alone first without those bees, to make sure she is partially starved, to get rid of that honey, then give her escorts and some feed.

Mr. Hart—I would like to ask if it is not a good idea to feed the queen when you are treating for foul brood at times when the bees are not doing much?

Mr. France—Yes, a most excellent time. You will accomplish two things at once. Only there is one danger. If you take away the brood it makes them restless and uneasy, unless there is a good deal of feeding done. If there is a little swarming impulse it makes quite a difference. It is difficult to treat foul brood unless there is a natural honey-flow coming in.

Mr. Hart—I would like to ask again if it would not be a better idea not to extract the honey from these two combs, only at a time when the bees were doing well in the field?

Mr. Francis—Does the queen-bee ever deposit any honey in the cells? If not, what difference will it make what kind of honey she has, whether foul brood or not?

Mr. France—I don't think she does, but sometimes she has an overload, and she may feed it to some other bee that would. There is a little risk there. Keep on the cautious side.

REPORT ON NATIONAL HONEY EXCHANGE.

Mr. France presented the report on the National Honey Exchange of America.

Mr. Brown—With regard to this matter I would like to say that, as you see, this is the first step towards our National Commercial Organization, and, as was suggested in the paper read, it is to be a market for all of our product; it is hoped to be the place where those who now consume honey and are seeking the produce from you will come to this organization to buy. It is hoped that it will be so organized with such men at the head of it that every producer will have full and complete confidence in their management of it, and will willingly and freely trust and consign their goods thereto, knowing that they will get exact and just weight and exact and just returns, knowing too that if there be but one organization in the field which will manage and control and handle all this product, it will forever do away with the competition that now exists between localities, which has a tendency as all other competition does, to bear down the prices. Therefore, we expect through this organization to be able to advance to the producer the price of his product, and not necessarily increase it to the consumer. I don't believe this matter will affect the price to the consumer one particle. It will simply save to ourselves and to those who sell and produce the honey that which now goes into the pockets of people that are making themselves wealthy out of what we produce. For the inducement of those who wish to buy stock, the stock is placed at $25 a share; and we expect, of course, to derive some benefit to be induced to buy stock, outside of this matter of boosting the price of our goods. I can only outline something we are doing in California, having this last winter completed an organization in central California. This organization charges a commission for selling honey—it does not make any difference what that might be—we will say it is five percent—there are our resources and the dividends; after the expenses of the Association have been paid, whatever is accumulated will be dividends. We place our honey upon the market through this channel because we are members and we pay five percent for marketing our own goods through this channel. It takes two percent of the five percent to meet our expenses, then there will be repaid a dividend of three percent back to ourselves on our stock. It can be proportioned to the amount of goods contributed as is done with us in California. Then we do not only get back the dividend or rebate on the goods we contribute but also on the entire gain of the Association. We had put in our charter a clause giving us an opportunity to manufacture and deal in supplies. That is simply put in there in case, after years of experience and growth, we grow into something of that kind. But the first thing we want to direct our attention to is the market.

Mr. Krebs moved, seconded by Mr. Laws, that the report be accepted.

Mr. Abbott—I rise to a point of order. This Association is discussing and passing action on the business of another Association, which is a stock company, and is to be entirely different from this Association, and it seems to me a strange anomaly that there should be organized inside of this Association another financial Association whose avowed purpose is to crush the business of at least one-fifth of this Association, for one-fifth of the people here are supply dealers. I confess that this is the strangest anomaly that I have ever known to exist in the form of legislation, that, I, as a member of the National Association, a supply dealer. should sit here and help make a Society whose avowed purpose is to crush out my business. I protest.

Prof. Benton—I supposed this was an Association of honey-producers to protect honey-producers' interests, and not an Association of supply dealers.

Mr. Abbott—I have no personal reference to the matter. I believe in the courtesy of this Association being extended to these people to organize this Association, but I claim we, as members of this Association, have nothing to say about how they shall conduct their business. I have no objection to what Mr. Brown has said, or to the presentation of the matter or the organization of those here, but now that it has become a permanent organization I claim it should hold its meetings separate and apart from us.

Mr. Whitcomb—While I have no interest in the sale of honey or supplies, or anything of that kind, yet I do consider when this Association goes into anything of the kind, or gives any countenance to it, it is treading on very dangerous ground indeed. If the people of California or Colorado wish to organize such an Association I have no objection whatever, but I object to dragging the people of Nebraska or Ohio or Missouri into an organization in which they have no interest.

Dr. Bohrer—I do believe we have a right to recommend such an organization as will successfully combat the combines and trusts and such persons as wish to take stock have a right to do so.

Mr. Krebs—I do not see any need of all this apparent opposition. This organization is intended to benefit the producer of honey and not to run in opposition to any class or clique of people. It is simply to get the benefit of the sale of honey at a reasonably good price without having to hunt all over the world to get our prices; it is just simply to regulate prices.

Mr. DeLong—I really think it is the Association's business to procure a market for their product. If we spend the best efforts of our lives in producing a product and then put a great portion of that into the hands of untrustworthy men to handle and dispose of to the consumer, I think we have lost one of the important points of our mission. We seem to be in the condition that we can produce the honey but when we have produced it another class of people comes in that are not in the business at all, and they say, you shall not market your honey. I say we do market it. I say we agree on this exchange and we see the destiny of our product.

Prof. Benton—I think there is a good deal of misapprehension here. For my own part I would not think of going into any such organization as is spoken of if it were designed to crush the supply dealers, because they are a useful set of people, and the supplies of these people must necessarily in the beginning come from these very supply dealers. They are not to be crushed, they are to be encouraged; they can form a part of it as well, and I see no antagonism. I do not see that the National Bee-Keepers' Association is the promoter, or sponsor, or anything of that sort, for the honey-producers' association; this is simply a convenient place to bring forward such an idea.

Mr. Abbott—I agree fully with Mr. Benton. We have got on common ground. I am not offering any objection. In fact I would like to amend the motion that we heartily concur in the movement, and will offer no opposition to it in any way, but my contention is that this is a separate body and we ought not to take the time of this body. I leave it to Mr. Brown himself if I am not right.

Mr. Taylor called for the re-reading of the report which was complied with by Mr. France.

Mr. Taylor moved, seconded by Mr. Abbott, that the report be laid on the table.

The President put the motion, which on a vote having been taken was declared lost.

The President then put the motion to adopt the report which on a vote having been taken was declared carried.

Mr. York then read a paper written by Mr. Poppleton, of Florida, on the subject of "Bee-Paralysis," as follows:

BEE-PARALYSIS.

Early one season over 20 years ago, while keeping bees in northern Iowa, I noticed that many of my colonies seemed strangely affected, and in most cases seriously so. I examined leading text-books, as well as our periodicals, but could find no reference whatever to anything like it. A sample of the affected bees was sent to Prof. Cook, but it was all new to him. About this time inquiries commenced coming to our editors from various and widely separated localities about this same trouble. It came to be known as the "Trembling Disease," "Nameless Disease," afterwards as "Bee-Paralysis," which is more appropriate, and will probably be its permanent name.

The disease seems to be widespread, not only found in nearly all sections of our own country, but also in foreign lands. There is quite a general belief that it is confined to the South, but this is a mistake, as, with one exception, the most serious loss I have had from it was in northern Iowa. The fact that it is almost impossible to winter a diseased colony in the northern part of our country, prevents its becoming very serious there, and for that reason only it is more common in the South.

Is the disease contagious? If so, how, and in what way is it communicated from one bee to another, and from colony to colony, and, if not, what causes the disease, is one of the important problems yet to be solved. This problem must be solved, and correctly so, before we can fully control the disease. I am not at all sure I am right, but think the disease can be, and is, communicated from diseased bees to well ones. Careful experiments seem to prove that it is not passed along by means of combs, honey or brood, and I now transfer them from sick to well colonies without bad results, being careful not to give any sick, well or dead bees from an infected colony to a well one.

Whether queens can and do transmit the disease to their offspring is one of the points not yet determined, and is, in my opinion, a most important one. Giving a diseased colony a new queen has not with me been a success, yet many facts which have been carefully observed lead one to the theory that queens are largely responsible for the spread of the disease, and it seems to me much more prevalent in certain strains or families of bees. One fall, some years ago, I purchased quite a lot of young queens from one of our best breeders. The following season, nearly all of the diseased colonies in my apiary were those to which one of these queens had been given, over half of them being affected. The breeder whose honesty and truthfulness cannot be questioned tells me that so far as he knew there was none of the disease in his apiary at the time he reared those queens. Another time I obtained two or three queens from one of the noted breeders in this country. There seemed to be no trace of the disease about them or their colonies at first, but part of them, and nearly every colony of their royal daughters were diseased the following season. I had to purge the apiary of every trace of this strain. Same also occurred with another lot of purchased queens, while the descendants of other purchased queens have been free from the malady.

This question of the transmission of the disease through queens, and the fact that when once diseased the colony will continue so after a change of queens, looks as though queens and contagion both aid in spreading the disease, and opens up a wide field for theory and experiments.

The sign of disease is readily seen and recognized. Should any quantity of dead bees be seen outside the entrance to a hive, a few struggling and dying bees will usually be seen among them. If not too badly diseased, well bees will be seen on the entrance-board, tugging and hauling at sick ones, trying to drag them out of the hive. At first glance one may think that robber-bees are being fought, but a little closer observation will show the plain difference between driving off robbers and dragging out sick ones that don't seem to want to go. On taking covers off of hives the sick bees will try to come to the light, and after a little time can be seen crawling on the top of frames. Their motions are slow and laborious as though weak and partly paralyzed. They cannot take wing, but cling tightly by their feet to anything they are on. This tight clinging by their feet is the surest sign of the disease and very readily noticed.

The disease is exceedingly erratic in its course, sometimes commencing suddenly, sometimes slowly. It may destroy the colony in a few weeks or it may linger an entire season, or it may recover suddenly, with or without some seeming cause for doing so. This last trait has caused many who have seen only one or a few cases to conclude that they have found a sure cure because a colony happened to recover soon after something had been done. This erratic character of the disease has not only led many to wrong conclusions, but makes it much more difficult to reach right ones. Observing scores or even hundreds of cases is necessary before coming to any definite conclusions at all, and we know too little of the disease yet to think we know very much about it at the best. Let us hope that some competent scientist can give us more definite knowledge than we now have.

Several methods of cure have been suggested, nearly all of which I have tried. None have given satisfaction except the use of sulphur. A single application of this has always affected a cure, except in two instances, when a second application was required. The method of treatment was to go to the colony to be treated some time during the day, and remove all the combs containing any eggs or unsealed brood, giving them temporarily to other colonies. In the evening as soon as all the bees are in from the fields, sprinkle all the bees, combs and inside of the hive very lightly with powdered sulphur, trying to get a little on all of the bees. I never measured the amount of sulphur used, but think about a tablespoonful to a small colony. Usually the bees will die off quite rapidly for a few days after treatment, then cease doing so quite suddenly. The original combs of brood taken away, or others, should be returned the day following treatment. Reason for having this brood out of the hive during treatment is because sulphur kills all unsealed brood that it touches. It is very important to observe this point in actual work.

While this treatment has always succeeded with me, yet I prefer an entirely different method.. That is, to make a new nucleus with young queen, building this neucleus up into a strong colony by giving it the brood from the diseased colony, a comb or two at a time, as rapidly as it can use them to advantage. A cured colony is always very weak, so much so as to be of little or no value during the season of treatment. A nucleus built up by combs or brood from a sick colony will be in fully as good condition at the close of the season as would be a cured colony, with the added advantage of having a young queen with no known taint of the disease. While a cured colony is not apt to be again diseased, yet my experience makes me very shy about using the queens of such colonies for breeding purposes; and the best way of being safe from danger of that, is, not to keep such queens.

I hear reports of two other diseases known as "bee-paralysis" in the localities where they exist—one of them from California, the other from Wisconsin. Whether these are really types of that disease or are new diseases, is more than I know. The existence of these in our country emphasizes very strongly the need of thorough examination of the different types by competent scientists. I would suggest that our Association formally request the United States Department of Agriculture to take up this work and make a thorough investigation of these diseases.

O. O. POPPLETON.

Dr. Miller moved, seconded by Mr. Laws, that this Association request the Department of Agriculture to make the investigations suggested by Mr. Poppleton.

The President put the motion which on a vote having been taken was declared carried.

Mr. Laws—Is this a prevalent disease in our country now?

Mr. Andrews—We very seldom have a year but we will have from one to five colonies diseased. It never got very extensive with us in southern California.

Mr. Francis—In Colorado we have a great deal of this paralysis. It seems to affect the bees before the honey-flow, and when the honey begins to come in it disappears. But this season seems to be an exception. Nearly all my colonies show it. We have lost quarts and quarts of bees.

As a practical answer to the question as to the commonness of the disease Dr. Miller suggests that the members who are familiar with it arise, and at his response some twenty-five or more stood up.

Mr. Taylor—I have had a little trouble but exceedingly little. I have only had one or two cases. In the spring I had a colony troubled with disease and I removed the queen and gave the colony a new queen. When I removed the queen I put her in a cage and kept her for a few days till some one came along and wanted a queen. I said, "I have no queens to sell; I haven't any more than I want, but I have a queen here that I have just removed because the colony was diseased. If you want the queen take her along and try her." In the course of three or four weeks my bees were all free of the disease and my friend came back and told me his colony to which he had introduced the queen had contracted the disease; showing that the queen had something to do with the disease.

Dr. Bohrer—How long after the introduction did they contract it?

Mr. Taylor—Four or five weeks.

Prof. Benton—My own experience had been very limited, but it has been reported to the Department of Agriculture from a good many States, principally Texas, Colorado, California, Florida and Pennsylvania. I recall those now, and there are others. It was particularly virulent in Texas, Colorado and California.

Dr. Miller—There is one question that comes up with regard to this which possibly might throw a little light on the treatment of the diseases. In general the disease is not bad. My bees have had the disease many and many a time, and I do not mind it at all; it doesn't amount to anything. Down South it is a very serious thing. Why is it so much worse in the South than in the North?

Mr. Poppleton—I had the disease fully as malignant in the North—in northern Iowa—as I ever had it in the South. The first winter it came the old bees continued dying all the time and continued for several months with no new brood being reared. Of course, with the old dying all winter, before the spring comes, there are no bees, and the disease cannot be distributed further. I know of no other reason why it has been so. The only difference in the South is with the weather; there it continues year in and year out and there is no interval of brood-rearing.

Mr. France—I found another trouble that so closely resembled bee-paralysis that some of us may get conflicting ideas. I found it in Wisconsin, and by reports I learned that there is the same thing in Missouri, Illinois and Iowa, and straight on through to New York, and almost at identically the same time of the year. The characteristic points of it are, first, we see a colony that is unusually strong, and in three days' time it has depopulated from half to two-thirds of all the bees, both young and old bees leaving home. On close examination out in the grass from two to six and sometimes twenty feet away we find here and there a bee running as if something was after it. It comes to a blade of grass and tries to climb it and makes an effort to fly and falls down again. With paralysis there is more of a tendency as it travels to travel slower, and more with a shaky motion to the body. These do not seem to have time to shake. The seriousness of it is, it simply depopulates the whole hive, so much so that in an apiary a little way north of me there was at least a half or more of all the bees, in three days' time, gone, just at the opening of the honey-flow. It recovers itself in a few days, as fast as the brood can hatch out, and it re-appears again right in the basswood flow. After finding it in some of those northern yards I returned to my own bees confident they were all right, but I found it very much all through, and I kept on going, and going, and seemingly there was no limit to it in our State. It was the same thing. Before I got around the circuit it was all over with. The first yard I went to I understood Mr. Benton sent a man out there to investigate, but by the time word could get to him and the man was sent out there, it had quit. But we will be on the alert and watch for it. To say what caused it I could not say anything in particular. I took a bee and put it under a glass, and I could not see any parasitic trouble, and I am at a loss to know what to call it, for I hardly feel like calling it paralysis.

Mr. Davis—I did not rise when asked because my bees didn't have the trouble just as you describe it, but Mr. France has described the trouble that I find in my apiaries in southern Iowa. I didn't know what caused it.

Prof. Benton—There is one point perhaps that Mr. France has failed to mention. That this case in Wisconsin could not be ascribed at all to spraying. As Mr. Rankin was in western Michigan, I requested him before coming to Washington to go across to Wisconsin to see what he could there. He arrived a little late; the disease seems to disappear so suddenly. He investigated the surroundings, and was confident it was not due to spraying. It was not foul brood; it was not ordinary paralysis, but there were such peculiar conditions we should have to conclude it was some form of paralysis. There is where we have to take it up another year and make a thorough investigation to see the cause of it. He could only make one single suggestion, and that is a mere idea that entered his head, that possibly between pear-blight and this disease there is some connection, because pear-blight was abundant about this apiary that was so largely affected. If any one is situated to make observations of that I shall be glad to report on it another year.

Mr. Hart—I would say our fruit-men do their spraying in February and the early part of March, and this paralysis comes on between August 30 and September 10. We have what has been spoken of by Mr. France, and also in addition to that when the bees die they seem to be full of sour watery stuff.

A Member—I have had some trouble in Colorado, and Prof. Benton's suggestion that it might be pear-blight in connection with paralysis reminds me that the worst trouble I had was with bees located in a pear orchard which was badly affected with blight. I hadn't thought of connecting the two diseases, but perhaps that had something to do with it. It occurs with me usually about the first of May and continues until October. Mr. France's description of the disease is identical with my experience. I have eradicated it in some few cases by changing the queens, but I don't think it is a reliable remedy.

Mr. France—In reply to Mr. Benton, I also looked after the spraying conditions north of me. Now in my own locality I had four pear-trees and that is all I know of, within several miles of my apiary, and there were none near my out-apiaries, and they were fully as bad as the others. About twenty miles almost directly west of this yard in Wisconsin where Mr. Rankin went, it was fully as bad, and there are no pear-trees in that vicinity. I question if we dare attribute it to that. I don't believe spraying has anything to do with it.

Mr. Root—Mr. France describes exactly what I have seen in various parts of the country, and what I have seen in our own locality, but usually after the honey-flow. I have seen one other peculiar symptom accompanied with it, that was that the bees would be tugging at their abdomens with their hind legs, and after struggling for some time they would separate the abdomen from the rest of the body, and they would be running around in that way. I have seen them come down in the air, head over heels, in that way, and apparently had made the separation in the air. I have seen the separation take place on the sidewalk, and I have watched them actually dismember themselves, apparently as if in a good deal of pain. I sent a few specimens to Mr. Benton, and if I remember rightly, Prof. Wiley found a slight trace of poison. Whether they had gathered anything that poisoned them or not I cannot say.

Mr. Poppleton—Mr. Laws was asking about the prevalence of the disease. You cannot pick up a single volume of any of our bee-papers but what you will find reference to it. I get letters from different States in the Union asking about it. Mr. Ford lost his entire apiary, and another gentleman down in Florida almost went out of business. It is scattered universally. The form I speak of is exactly identical with what I had in Iowa. I think Mr. Benton tells me they call it the "May disease" in Europe, because it is more prevalent then. It is spoken of in the Australian journals. It cost me 10,000 pounds of honey one year; it costs me a little something every year; it is costing now a great deal. It is exceedingly erratic in its operations. You cannot tell anything about it; it seems to respond to one kind of thing at one time and to another at some other time. My own impression is that one of the worst troubles is through the queen, and I have entirely refrained from ordering a queen from outside of my apiaries, because of the danger of bringing it in. Not with the queens themselves, but their progeny. The more experience we have with it the more we know we don't know about it.

Mr. Krebs—I have talked with a very prominent bee-keeper of Texas on the subject of paralysis, and he told me he could not figure it out in any sense, and all he did for it was simply to wait until the honey-flow commenced. It is a spring disease, and when the honey-flow comes it passes off. It will come back the next spring in some cases and in others it does not.

H. Stewart—There are many here vitally interested in the subject of foul brood, and in a private interview with Mr. C. Stewart, of New York, he has outlined a treatment that has not been touched upon at all and if we ask him he would take the floor and describe his treatment. It is a treatment to be carried on this fall.

Mr. Whitcomb—Among swine-breeders there are about twenty or thirty different kinds of diseases which we attribute to cholera. Among cattle we know they go out and get something that kills them. We attribute all these diseases that bees are heir to, to bee-paralysis which we do not attribute to foul brood. Now we need to understand ourselves and define what it is. I have had two cases. In the first case I superseded the queen, and she built up the finest colony I ever saw. The next had shown symptoms of cobaltic poison, and I went over to a friend and found he had left some honey in the cellar, and the flies were there and he had given them fly-poison. Sometimes they bring in poison from the fields. We don't know anything about it.

Mr. Poppleton—The idea that it comes on just before the honey harvest, and goes away just as soon as it is over, is only partly true. There is always more of it just before the honey harvest; when the honey-flow fairly commences it lessens, but some will carry it right straight through the honey harvest. There is not any one rule to follow at all. There is one disease that is known universally as bee-paralysis.

C. Stewart—Perhaps in giving that treatment I ought to say sometimes the question is brought up about changing the hives. We treat those bees right in the same hive, providing you don't leave any comb or honey there. Some of our people have gathered up the refuse from a hive badly affected with black brood and sent it to our bacteriologist at Cornell University, and he was unable to obtain a culture from it, showing there were no living germs after it reached him. With reference to the treatment I was asked to give, it is, at the end of the honey season when all brood-rearing has ceased—depending on where you are located—when there is no brood in the hive you can take all the combs from the diseased hive and give them a clean set of combs from some healthy hive, and when the spring comes you will find that the disease has disappeared, there being no brood there to continue the disease, and there being no honey except what little they take in their honey-sacs with them, and that being consumed before the brood is reared again you will find the colony in nice shape.

Mr. Poppleton—The most important point in my entire paper not one has touched on, and that is the method of curing bee-paralysis by transferring the brood and building up another healthy colony. I think that will be far more satisfactory. It has the advantage of ridding the apiary from all signs of the disease.

Pres. Harris—It is almost utterly impossible for me at this time to name a committee of two from each State interested in bee-culture, but through the bee-papers, it may be well at no distant date to take this up and correspond with both the president, and the others and make suggestions and I will then forward the committee to the Manager and he will notify these people who have been appointed, so that they will be ready to do their duty.

Mr. Haines—I would like to have some of the experts explain the treatment of pickled brood.

C. Stewart—I am not so well posted on that as I am on black brood. We have a disease near Syracuse that differs a little from the old-time pickled brood that was pickled in its own juice. This seems to have dried down, and when the proper time comes for the larvæ to be capped over it simply straightens out in the cell and the head turns black, and to distinguish it we call it "neglected brood," because we find a great deal of it in the time of a drouth, when honey is coming in very slowly. We find apiaries badly depleted to a great extent; that is the most trouble we have had with pickled brood in New York State.

Mr. Davis—I think pickled brood troubles only black-German bees. I have been troubled somewhat with it. I don't think it is serious at all. It is like the bee-moth. By introducing the Italian bees it will disappear almost entirely.

Mr. Haines—I have to differ from the gentleman on that. I have as good an Italian queen as you would wish to see; there are two colonies that swarmed from it last year and they are both affected with it. Mr. France examined some yesterday from St. Clair County, and pronounced it pickled brood, and he says it will dwindle down until there is no brood at all. That is my experience. I don't say we have much foul brood, but we are just as bad off with pickled brood.

No. 159—I was badly scared over this business this year, myself. I found it in one of my apiaries and in very bad shape; found it had depleted two-thirds of the combs in the hive; the colony would be affected all over and in perhaps a very bad shape, two-thirds of it would be entirely destroyed. I wrote to the President of our National Association and he told me that they needed protection and feed. I went to work and contracted the entrance to my hives. I had them on the Miller bottom-board and the entrance wide open. I contracted the entrance and fed liberally, and the disease has entirely disappeared. I also went to an apiary where there were Italian bees, and I narrowed the entrance to those hives, and shut them down where they were warm, and fed them with sugar syrup, and the disease has entirely disappeared.

No. 152—In my experience with this pickled brood I believe it to be black brood in its incipiency. From the causes given by most of the experts on pickled brood they tell us that it becomes so by being neglected. I found it in Colorado with a little honey, and I found it in medium colonies with a little honey, and in those that have plenty of honey; I found it in the honey-flow and I found it in the very strongest of colonies, exactly what Mr. France showed me yesterday, and said it was pickled brood, and he gave me a very severe look when I told him it was black brood. I followed a case down from just one or two cells of so-called pickled brood in the apiary till you could see it develop into the most malignant case of black brood in all stages, from very few cells to others entirely dead from disease. I think the locality must have something to do with it.

J. C. Stewart—This gentleman stated that his bees recovered after they began to feed. I would like him to state if the bees had plenty of honey in the hive at the same time?

No. 159—Yes, but it was sealed honey.

J. C. Stewart—I believe bees can uncap honey about as well as anybody else. I had thirty cases of this pickled brood at one time in New York. I had it once last year and again this year; about five cases this year; and at no time have my bees been short of feed, and I have not fed anything to help them get rid of the disease, nor did I kill a single queen, and for three years previous to that I fought foul brood, hammer and tongs, night and day, in fifty or sixty colonies. I know it has no connection with foul brood whatever. I know these thirty colonies have had pickled brood, and they got well and I never lifted a finger to help them in any way.

C. Stewart—I don't think you will find that pickled brood will ever develop into black brood or foul brood. The conditions that prevail may be as favorable to the development of black brood as of pickled brood.

Mr. Rhees—I have had some experience with pickled brood. Some four or five years ago I got quite alarmed. Invariably they got low during the season. I came to the conclusion that pickled brood was simply the death of the larvæ. I understand it is caused by some life that grows in the matter that is decaying. Nearly all diseases are caused by some kind of life. I believe when the conditions are favorable to pickled brood they have it. When feed is poor or the weather cold, or the bees cannot get water, or something that is needed to feed this young larvæ, it dies. When conditions are favorable in the hive the percentage of deaths is small, and the bees pull them out before we ever see them at all. I believe the larvæ die in our colonies; if the larvæ are removed immediately we do not see any pickled brood. If they die in large quantities we commence to be alarmed at the situation. In some instances where the vitality of the queen is very low and a colony gets to the hives, and the brood is already started, the bees get behind and they cannot catch up, and the disease will finally kill the colony in some instances. I do not believe pickled brood is contagious in the same sense as foul brood. The only way we can cure it is by keeping the vitality above it, and the conditions of the bees good.

Pres. Harris—As your presiding officer I do not know that in my life I have ever felt prouder to preside over a deliberative body of ladies and gentlemen than I have this one. It has been one of the most harmonious meetings I have experienced in all walks through life We are all stars in the universe, some shine brighter than others. We may not all walks on paths of flowers, some of us have thorns in those paths and walks in life, but by our goodness, and by casting aside our selfishness, we live to better the conditions of one another. I should say to you here that the saddest time I have is when I say good-bye to those I have been associated with, in a meeting of this kind, and when today I say farewell to you, it is not a farewell forever, because I expect to meet many of you again. But before next year many of those who are here—I hope not—will go over to their last Home on the other side of the river, and I hope before you leave you will have a hearty hand-shake, you will come in touch with one another and get down to that point in life where good Christian people get—while I may not be one of them, I believe in it—that you may assemble together and do unto others as you would have them do unto you. That is the proper thing in life. Do not, when you go away from here, fix up your little slates for the next officers; look at this from a sincere standpoint; do your duty. If anyone writes you a circular, use your own judgment, and then in the future you will have an organization that will not go on in a selfish channel for one or two cliques that may be there, but for the whole interest, for the whole bee-fraternity of the United States. Always bear this in mind, and you will have done a good thing in life. I want to say another word in conclusion. Do not forget our bee-papers, that you may get proper education. They do much to upbuild our industry.

Mr. Taylor—If there is no other business I move the convention adjourn *sine die*.

The President put the motion, which on a vote having been taken was declared carried, and the convention adjourned at 12:30 o'clock p. m., Sept. 30.

Our Sister Bee-Keepers

Conducted by Emma M. Wilson, Marengo, Ill.

An Elder Sister's Experience—Robber-Cloth.

I am 70 years old and my sister is 60. When I started with the bees I expected to interest the younger members of the family, but have failed in that. Three of them are away from home, and the one that is left has more than enough to do, for in the summer months, when we have to work the most with the bees, we have tourists with us, and then in the hot season my strength seems to fail me. Last season I was so slow in my work with the bees that three of the children of our visitors got stung.

Only one colony came through the winter in good condition, but it did splendidly. It built up fast, and was very strong, being four stories high. I got more honey from that colony than I had taken from the 5 before. They were so orderly, so well-behaved, so intent on their own business, so watchful for enemies.

But how was I to get to the bottom of the "castle" for queen-cells? I meant to divide it into 3 and give each a queen-cell, which would have been an easy enough thing to do if I had had an assistant, for I could hardly lift one of those frames full of honey and bees. I took away the full combs of honey, and the frames containing brood I put into a new hive. But when I got to the second story they just seemed to say, "Hands off! you shall go no further". So I shut them up with full supers of empty combs, and without a single queen-cell; and, what was worse still, when I went to take away the full supers the bees had taken possession, and were transferring the honey into their hive. I had been far too slow, but they had not. They were masters of the field, and knew it, too. When I objected and brushed them off the combs, they were very angry. However, they took care of the new colony and sent a nice swarm into it, making it almost as strong as itself.

I have been too "careful and troubled" like Martha, being seldom free from "bees in my bonnet". I am trying now to free myself from this. I may keep one or two colonies on the let-alone plan until I see if my strength comes back. In the meantime I must rid myself of carking care and "be careful for nothing". A Sister.

Muskoka, Ont., Dec. 10.

After the interesting experience you have had it is greatly to be hoped that returning strength may allow you to keep in the ranks. Indeed, when the true virus of bee-fever is in the veins one is not likely ever to be freed from it. Are you sure that interest in the bees is not the very thing to preserve and increase your strength? It's the other cares, the indoor cares, that are the carking ones, and the care of the bees helps one to let go of the others. At 70 quite a number are still active in the business, some of them producing their thousands of pounds of honey.

When taking away those full combs of honey it would have been an excellent thing to have used a robber-cloth to throw over the combs, thus preventing the bees from geting started to rob. When once they get thoroughly started robbing it makes them furious, and they act like so many little demons, demoralizing the whole apiary. The best way is to watch out that they do not get the least start, and a robber-cloth handy to throw over any exposed honey is a big help in that direction.

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OTISVILLE, PA., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. FRED FODNER.

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Reports and Experiences

Enthusiastic About Bees.

I am only a "small potato", but I am getting mighty enthusiastic about bees. I lost all I had last winter, but I bought 8 more colonies and increased to 39 strong colonies, which I have in the cellar where they seem quite comfortable.

The cellar is one built specially for them, and, of course, to my mind it is just right. I studied Miller, Bingham, Doolittle, Root, and others, and then made one to suit my surroundings and myself.

I was very sorry not to be able to meet with the Chicago-Northwestern Association when they held their annual convention, as I had hoped to do, and see with my own eyes, and shake hands with and talk to some of the noted bee-keepers of whom I have read with so much interest. But with us farmers business is always pressing at that time (or any other), so I shall be content for another year to read what they write in the bee-papers.

Berrien Co., Mich., Dec. 6 E. L. HALL.

A Fortunate Beginner—Successful Season with the Bees.

Last spring a man bought 2 colonies of bees from me, and increased to 6, securing 600 pounds of honey. How's that for a beginner? I have induced him to subscribe for the "Old Reliable". He has the bee-fever all right, and I think will be a good bee-keeper in a short time.

I had 13 colonies spring count, increased to 19, secured about 200 pounds of comb honey and 2000 pounds of extracted. The best colony stored 275 pounds. This is a good strain of bees, and I expect to breed from them in the spring.

The bees are wintering well so far. They had a good flight yesterday.

A. J. FREEMAN.

Neosho Co., Kans., Dec. 31.

Cellar-Wintering of Bees.

Last spring I had 80 colonies left out of 87 which I put into winter quarters in the fall. I sold 40 of them and built up to 45 colonies,

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but secured only 832 pounds of comb honey. The past season was not nearly so good as that of 1903, as in that year I had 37 colonies in the spring, increased to 87 colonies, and secured 4210-¼ pounds of comb honey.

I put the bees into the cellar Nov. 25 in good condition. Last winter I left 15 colonies out-of-doors as I had not room for them in the cellar. I lost 1 out of the 15, 1 in the cellar, and 5 from spring dwindling. I use the 10-frame dovetailed hives.

My plan in wintering is to nail the bottoms on the hives, leaving a ⅜ entrance. I keep the dead bees away from the entrance with a wire hook, and the cellar is as dry as a powder-house. We have the bees, vegetables, etc., all in the same cellar, and I keep the thermometer as near to 45 degrees as I can.

It has been very dry here for two months, but we had 5-¼ inches of snow on the 11th, which I think will be a help to white clover.

I live in a town of 800 inhabitants. I have my hives arranged from 6 to 8 feet apart in straight rows, all on stands 4 inches high, with 10-inch alighting-boards. I do not allow any weeds or grass to grow 2 inches high.

E. B. PRITCHETT.

Warren Co., Iowa, Dec. 15.

The Problem of Wintering Bees.

Under this heading the American Bee Journal publishes an article in the issue of Dec. 22. From the experience I have gained during the last few years I can only say that the writer deserves great credit for the practical hints he gives to bee-keepers concerning ventilation. His advice can not be neglected by bee-keepers, without loss on their part. The bees must be kept warm, but they must also have plenty of fresh air, and how to combine these two is to solve a problem that is very important, especially to young bee-keepers. Before I knew how to prepare bees for winter

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I had great losses, therefore I will explain how I winter them on their summer stands.

In the fall when cooler weather comes—after the first frost—I select a day which is not windy, for bees do not like to have their hives opened on a cool and windy day. I lift the cover slightly, and blow in sufficient smoke to make the bees leave the top-bars. Then I place over the top-bars a wire screen large enough to cover them well. After doing this I place an empty box on top of the hive filled with excelsior (very fine shavings) about 6 inches deep, or enough to shut off the cold air. The boxes I use for this purpose are the same as those I use for hiving bees, and are about 9 inches high. The best cover to use on the box is board strips nailed together, leaving between each strip about $\frac{1}{4}$-inch space, through which dampness which is caused by the sweat of the bees, may escape. Then the roof is placed over all. The box is placed on the hive and fastened on 4 sides with small staples. To drive them in with a hammer is not advisable. They can be pressed in when the holes are pierced with an awl. The joints between the top-bars and the hive can be daubed with a little mortar if necessary.

A hive prepared in this manner needs only a small entrance; if the temperature goes below zero, $1\frac{1}{2}$x$\frac{3}{8}$ will be about the size. Under certain conditions more space is advisable. This will ventilate the hive well, and dispel all moisture, and in the spring the bees will be found in a healthy condition with no moldy combs, which I found so often before using this method. When bees are prepared for winter in this way the excelsior in the box must remain dry, and if it gets wet from exhalations it indicates that the flight-hole should be enlarged.

Bro. Alphonse Veith.
Spencer Co., Ind.

Getting Unfinished Sections Filled.

When I have unfinished sections at the close of the honey season I put then on good, strong colonies and feed extracted honey, and they fill them up. It pays to feed honey rather than sugar.

Dr. J. Archer.
Santa Barbara Co., Calif., Dec. 14.

Laboring Under Difficulties.

I put 8 colonies of bees into winter quarters in 1903, but they all died before spring. I then bought a colony, but it was very weak. By August it had built up pretty strong and swarmed. I fed it about a pint of syrup a day until fall. One large swarm came to me, and I bought a few colonies. I also had another old colony in the spring which was strong, but did not swarm until August. I fed it and kept it at work all the time. When the first super was about half full I put another one under it, and so on, and in the fall I had nearly 100 sections filled.

I now have 7 colonies in good condition for winter.

A. S. Beiler.
Lancaster Co., Pa., Dec. 16.

De Luxe Comb Honey.

On page 19 of Gleanings in Bee Culture for this year, Mr. Titoff has given us something of more than usual importance. I, for one, believe there is altogether too much labor and expense attached to the production of comb honey in small sections. Improvement in methods ought to be in the direction of simplicity and economy, but the tendency has been too much the other way.

Mr. Titoff makes a very strong point when he says that much more honey will be produced in a given time by the use of shallow frames than with sections. I know that the work of producing fancy honey in sections is fascinating. It is nice work when one have only a few colonies, but only a few of the larger bee-keepers in the country will bother with sections at all.

I can see one point that was not mentioned directly in the article referred to. The boxes could be used over and over again for honey. Sections are never used the second time, and very few shipping-cases are saved for a second shipment. I say, let us make a fair trial of

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Hardy varieties; yield big crops. Grafted Apple, 4½c; Budded Peach, 3½c; Black Locust Seedlings, $1 per 1000; Concord Grapes, $2 per 100. We pay the freight. Catalog, English or German, free.
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An experienced man to work with bees. Wages, $35 per month, including board. Also young man 18 or 20 years of age who wishes to learn practical bee-keeping; position by year; wages $15 per month, including board. No drones need apply.

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$12.80 For 200 Egg INCUBATOR
Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day.
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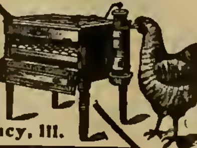
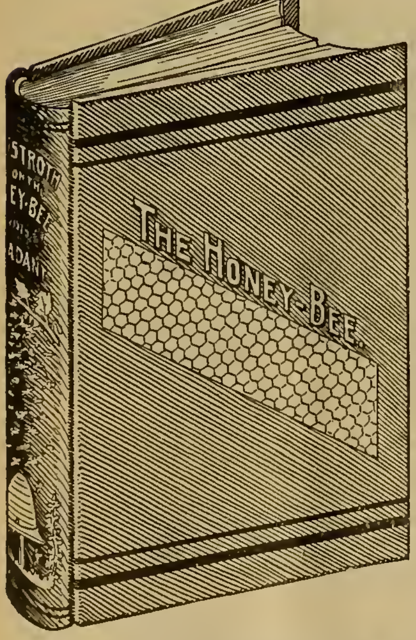


Langstroth on the ❊❊❊ Honey-Bee

Revised by Dadant—Latest Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.



The book we mail for $1.20, or club it with the American Bee Journal for one year—both for $2.00; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

GEORGE W. YORK & CO.
334 Dearborn Street, CHICAGO, ILL.

the tin boxes. The package that bee-keepers adopt and use is the one that will please the public.

It is our fault, not the fault of the trade or of the consumer, that any sections lighter than 1½ pounds were ever put on the market. The half-pound section has been advocated, but the craft had a little too much good sense to be drawn in on that fad. I hope to hear from others on this question.

Crawford Co., Wis. HARRY LATHROP.

[The article referred to advocated bulk comb honey put up in tin boxes with fancy illustrations printed on them. It is an idea much in vogue among bee-keepers in Russia.—EDITOR.]

Wintering Bees—Nice Weather.

My crop of honey for 1904 was 11,000 pounds. Sixty-three colonies have been in the cellar since the first day of December, and 63 are packed in wheat-straw on the summer stands, besides the 20 colonies at the out-yard packed. I had not the room in the bee-cellar for all, so I divided them by two as an experiment, or rather because I had to. I am now digging a new cellar, to be ready for another season.

We have had most beautiful weather all the fall and thus far into the winter, except two or three little cold-snaps. The last has just ended, being much the worse. Some three days of high wind, and ofttimes a blinding snow-storm with zero temperature, and for awhile 15 degrees below, made one think of "homestead" times.

The bees had a splendid flight yesterday, and a light one the day before, and it bids fair for another to-day. There are a few snow-drifts left from the recent storm.

Sioux Co., Iowa, Jan. 1. F. W. HALL.

Poorest Season in 35 Years.

I have been familiar with the appearance of the inside of hives of bees for the past 35 years, and I never saw such poverty-stricken hives and combs after the end of July as the past season. This is a little hard on one who depends upon his bees and sale of honey as a sole income.

I have taken 450 pounds of extracted honey from 80 colonies, from extracting-supers, and the light hives need that amount, or more, distributed among them to-day. I must get to feeding in earnest. I have already fed 150 pounds of granulated sugar syrup.

WALTER HARMER.

Manistee Co., Mich., Dec. 30.

Late Brood-Rearing—Bee-Stings—Overhauling the Hives.

Would it not be well to try to get brood reared, say as late as the last of September, so that there would be a considerable number of young bees to go into winter quarters that would not die before spring? And how can this be done?

Some one asked why there are so many dead bees in front of his hives so early in the season. Dr. Miller said he didn't know. May it not be that they died of old age? If the greater part of the bees die this way before March, brood-rearing will be delayed because there will not be sufficient bees to protect it, and the result will be weak colonies in the spring.

Of course with such full colonies in the fall more honey will be required to keep them through the winter. But what if it does take an extra frame of honey, these late-hatched bees will become producers next spring.

I notice accounts of some peculiar effects of bee-stings are given in the Journal. I read some months ago of a man who became insane from the effects of being stung. Recently I read of a man who, after eating quite freely of honey, was seized with severe cramps, from which he died.

The best local remedy I can use for stings is turpentine. Have several vials of it scattered about. Apply immediately after scraping off the sting.

Does the overhauling of the brood-chamber,

PROGRESS

I publish and recommend to you **THE RURAL BEE-KEEPER**, the best all-around 50-cent monthly bee-journal in America. On trial 3 months for this ad. with 10 cents. Clubbed with this publication both for one year for $1.25; or send us 25 cents for a 3 months' trial and your name and address on a 2-line rubber stamp; self-inking pad, 25c extra. Or send $1.00 and get The Rural Bee-Keeper and an Untested Italian Queen-Bee. Sample copy free. Agents get liberal terms.

Putnam Makes Good Bee-Hives
And sells them at reasonable prices. New catalog now ready. Address,
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Dept. 50-C. River Falls, Wis.

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The Dixie Home MAGAZINE, largest, brightest and finest ILLUSTRATED MAGAZINE in the world for 10c a year, to introduce it ONLY.

It is bright and up-to-date. Tells all about Southern Home Life. It is full of fine engravings of grand scenery, buildings and famous people. Send at once. 10c a year, postpaid, anywhere in the U.S., Canada and Mexico. Six years, 50c. Or, clubs of 6 names, 50c; 12 for $1. Send us a club. Money back if not delighted. Stamps taken. Cut this out. Send to-day. **THE DIXIE HOME,**
24A48t No. 75, Birmingham, Alabama.

BEE-KEEPERS! Send me your orders for **BEE-SUPPLIES** for next year's use, and get the discount: Oct., 6 percent; Nov., 5 percent; Dec., 4 percent. The above discount does not apply to honey-packages. Send for catalog. W. J. MCCARTY, Emmetsburg, Iowa

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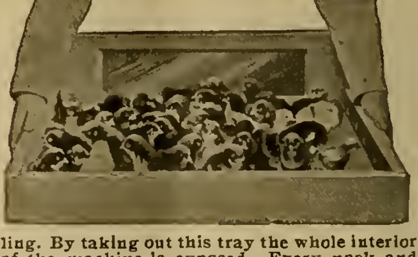
Sure Healer

For old sores on horses or cattle, such as scratches, cracked heels, collar sores, or any old or new cuts. Every farmer has the remedy at home. Will send recipe for 50 cents, coin or stamps. Address, G. FRITZ,
4A1t Box 17, PROCTOR, MINN.

EGGS From 70 Varieties of Thoroughbred Fowls given as premiums for getting subscribers to 25 leading Poultry Journals, etc. Address, **SUBSCRIPTION AGENCY**, Fricks, Pa.

Concerning Incubators.—There are several good incubators on the market and they are offered at very reasonable prices, in fact they are so very low that we are surprised that every family raising poultry does not have one. But there is one machine that seems to be in a class all by itself, and all on account of one feature, and a most important one, too—a removable chick-tray and nursery. After the chicks are hatched they drop into the chick-tray below the eggs, and when the hatch is all over this tray can be pulled out like a drawer and the little chicks carried to the brooder without handling. By taking out this tray the whole interior of the machine is exposed. Every nook and corner is in sight and can be thoroughly, quickly and easily cleaned. The incubator referred to is the Gem, made by the Gem Incubator Co., box 52, Dayton, Ohio. They have a new, large and profusely illustrated catalog that is free for the asking, if you mention the American Bee Journal. Send a postal to-day.



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Solid, Straight, Well-Built Combs.

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BEESWAX WANTED at all times.
Send for our 1905 Catalog.

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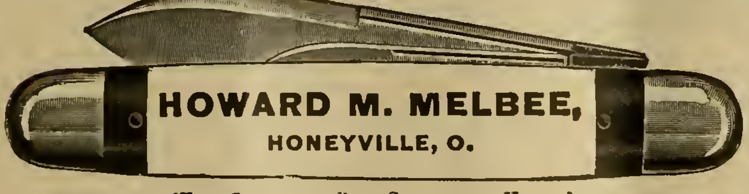
The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.



[THIS CUT IS THE FULL SIZE OF THE KNIFE.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $2.00.

GEORGE W. YORK & CO. Chicago, Ill

☞Please allow about two weeks for your knife order to be filled.

when bees are working in the sections (to cut out queen-cells, for example), cause any considerable lessening of the amount of honey stored? I suspect it does. The matter ought to be looked into, for in some methods to prevent swarming there is considerable monkeying with the brood-combs.

Allen Co., Ind., Jan. 3. D. McCARTHY.

Golden Italians — Feeding — Long-Tongued Bees—Plain Sections.

I notice that a good many people condemn the golden Italian bees. I have one colony that is a beautiful golden in the summer-time, and it is the third swarm that issued from the parent hive. I intended to put them back, but they had a fine queen, and as they were few in numbers I thought I would let her have them and see what she would do. I hived them on two empty combs, and fed them. In a few days she began to lay, and in a short time they were a good-sized colony, and to-day they are hustling to keep up life. When the first swarm issued from this colony I took 4 frames, bees and all, from it to rear queens from. After all this she filled the 4 empty frames and the bees stored about 36 pounds of good section honey, and the swarm which issued from this colony has the hive full of honey and a good winter's supply of bees, while the *parent* hive filled only 24 sections. Give me all golden Italians like the 2 I have and they will gather the nectar fast enough.

I use 8-frame dovetailed hives and Hoffman frames, and have no trouble in handling the bees. The hives have handholes in the sides, which I prefer to cleats, as I can stack them up close together, so that mice, or bugs or anything of that sort can not get in them. I have a few of the old Langstroth hives, but don't like them. They are too deep and the covers too heavy.

I put supers on top of the hives for winter, and if I have to feed I fill sections with comb

A HANDY TOOL-HOLDER!

Sent by Express, for $1.50; or with the Bee Journal one year—both for $2.00.

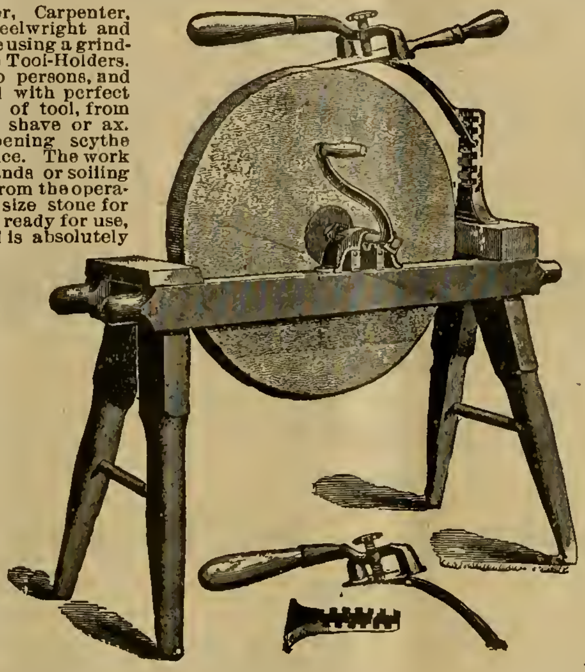
Every Manufacturer, Miller, Carpenter, Cabinet Maker, Machinist, Wheelwright and Quarryman, Farmer, or any one using a grindstone, should have one of these Tool-Holders. One boy can do the work of two persons, and grind much faster, easier and with perfect accuracy. Will hold any kind of tool, from the smallest chisel to a draw shave or ax. Extra attachment for sharpening scythe blades included in the above price. The work is done without wetting the hands or soiling the clothes, as the water flows from the operator. It can be attached to any size stone for hand or steam power, is always ready for use, nothing to get out of order, and is absolutely worth **100 times its cost.**

No farm is well-equipped unless it has a Tool-Holder. Pays for itself in a short time.

How to Use the Holder.

DIRECTIONS.—The Tool is fastened securely in the Holder by a set-screw and can be ground to any desired bevel by inserting the arm of the Holder into a higher or lower notch of the standard. While turning the crank with the right hand, the left rests on an steadies the Holder; the Tool is moved to the right or left across the stone, or examined while grinding, as readily and in the same way as if held in the hands.

For grinding **Round-Edge Tools,** the holes in the standard are used instead of the notches.



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Bee-Keepers' Supplies.
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Leahy Mfg. Co., East St. Louis, Ills.
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The ORMAS Incubators & Brooders
Low in price. Fully guaranteed. Send for free catalogue.
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BANTA MFG. CO., LIGONIER, INDIANA.
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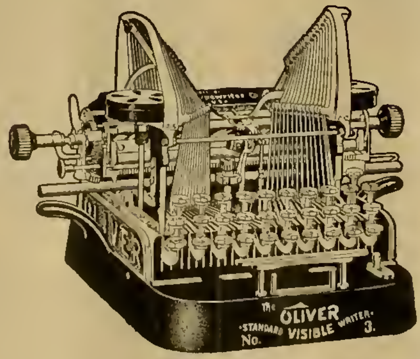
The Oliver Typewriter
The Standard Visible Writer.


The OLIVER
STANDARD VISIBLE WRITER.
No. 3.

Its Record has never been equaled. Art Catalog Free.
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in them with syrup, giving these to the bees. This plan has given good satisfaction. I use 1 part sugar 1 part water, and 1 part honey. I let this mixture stand for 10 or 12 hours, stirring well and warming it a little at first, so that it will dissolve nicely. When the sections are ready I lift the covers from the hives, set in as many of them as I think best, and close the hive. The bees soon get used to this and after they have been carefully handled a few times they do not fly out.

I have 2 colonies of long-tongued bees, and they are good ones. They do work on red clover, for I and others have found them working on it. With a glass we could see them putting their tongues down deep into the tubes of the red-clover blossoms. As we watched them work we could plainly see them lick the nectar out of the blossoms instead of sucking it, as a great many say they do. They may suck up syrup or honey, but they lick out the nectar first.

I have 54 colonies of bees. I have been a bee-keeper for 12 years, but have not entered into it so extensively before. In 1903 I started in the spring with 6 colonies, and put 34 into winter quarters. In April, 1904, I had 16, and increased to 54, which were in good condition for winter.

If I were to begin over again I never would use anything but plain sections, because they are easily cleaned and packed, and are neater. The holders are plain and easily cleaned and made.

I sell all of my honey at home, charging 15 cents per section for comb and 10 cents per pound for extracted. I also get 32 cents per pound for all the beeswax that I sell near by.

We are on the highest point between the Illinois River and the Mississippi, and we have lots of white and sweet clover, but the flow the past season was about ⅙ what it was the previous year. A. N. COOKE.

Henry Co., Ill.

No Rain in Southern California.

Southern California is still without rain enough to do any good, and it looks now as though we are to have another dry year. Bees are still being fed, but their owners are getting a little tired of it.

G. F. MERRIAM & SON.

San Diego Co., Calif., Dec. 19.

Great Demand for Extracted Honey

I am now running 49 colonies for comb honey, but I am going to fix up 10 or 12 more for extracted honey, as the demand for this article is so great that I can not fill my orders from drip honey or from broken comb.

In 1903 I had nearly 6000 pounds of comb honey and this year I secured about 2000 pounds. Both of these years my honey was all sold before Dec. 1, and people were asking for more. I sell all of it direct to the consumers, as the store-keepers will not buy any unless it is almost given to them.

I have 49 colonies of bees in good condition in the cellar, and hope for a good season next year. CHAS. LUEBKE.

Rock Co., Wis., Dec. 25.

NO DIRT LEFT
In clothes washed with the "BUSY BEE WASHER" 100 pieces in one hour and no hard work done. That's the record. Agents Wanted. Exclusive sale. Write for terms.
BUSY BEE WASHER CO. Box E, ERIE, PA.
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The Rietsche Press
Made of artificial stone. Practically indestructible, and giving entirely satisfactory results. Comb foundation made easily and quickly at less than half the cost of buying from the dealers. Price of Press, $1.50—cash with order. Address,
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A Customer Once, a Customer Always.
We manufacture
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For nearly 14 years we have published
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The best magazine for beginners, edited by one of the most experienced bee-keepers in America. Sample copy free.
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To **W. T. FALCONER MFG. COMPANY**
JAMESTOWN, N. Y.

W. M. Gerrish, Epping, N. H., carries a full line of our goods at Catalog prices. Order of him and save the freight.

CONVENTION NOTICES.

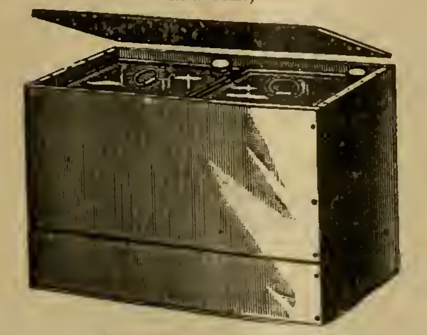
Wisconsin.—The Wisconsin State Bee-Keepers' Association will meet in the Supervisor's Room in the Court House, at Madison, Feb. 1, 2, 1905. All bee-keepers are invited to attend.
Augusta, Wis. GUS DITTMER, Sec.

Michigan.—The Michigan State Bee-Keepers' Association will hold its annual convention Feb. 23d and 24th, at the Eagle Hotel in Grand Rapids. The Eagle Hotel is located at 65 to 71 Market St., cor. of Lewis St., one block south of Monroe St. It will give a rate of $1.50 per day, and furnish a room free for holding the convention. The Michigan State Dairymen's Convention will meet in Grand Rapids at the same time, and advantage may be taken of this fact to secure reduced rates on the railroads. When buying your ticket, ask for a certificate on account of the Dairymen's Convention. The secretary of the Dairymen's Association will sign this certificate which will then enable the holder to buy a return ticket for one-third fare.
W. Z. HUTCHINSON, Pres.

4% Discount to Feb. 1st
on the **Best Dovetailed Hive made.** Cheaper than the cheapest. Circular ready to mail. Don't miss it. 200 second-hand hives for sale cheap.
The Wood Bee-Hive and Box Co.
48Atf LANSING, MICH.

HONEY AND BEESWAX
When consigning, buying or selling, consult
R. A. BURNETT & CO.,
166 SOUTH WATER ST. CHICAGO, ILL.

ABSOLUTELY PURE
Extracted Honey FOR SALE!
(In 60-pound Tin Cans, 2 cans in a box.)



ALFALFA OR BASSWOOD.
Sample of either mailed for 10 cts. to cover package and postage. Quantity prices on application. Address,
THE YORK HONEY COMPANY,
HENRY M. ARND, Mgr.
101 E. Kinzie Street, - CHICAGO, ILL.

WANTED--HONEY
COMB EXTRACTED
BEE-SUPPLIES
THE BEST MADE.
Root's Goods at Root's Factory Prices
Take advantage of the DISCOUNTS allowed on EARLY orders.
You will SAVE MONEY by buying from me.
Cincinnati is one of the BEST SHIPPING POINTS.
Lowest Freight Rates, Prompt Service and Satisfaction Guaranteed.
CATALOG MAILED FREE.
Office and Salesrooms—2146-48 Central Ave
Warehouses—Freeman and Central Aves
C. H. W. Weber, CINCINNATI, OHIO
Please mention Bee Journal when writing

Honey and Beeswax

CHICAGO, Dec. 7.—The market is well supplied with all kinds of honey; the demand is of a light nature. Fancy comb honey brings 14c, but quality as well as appearance is necessary; No. 1 sells at 12½@13c; off grades difficult to move at 1@3c less. Extracted, choice white, 7@7½c; amber, 6@7c, with off grades about 5½c per pound. Beeswax, 30c.
R. A. BURNETT & CO.

BOSTON, Jan. 9.—The market is without change since last writing. The demand continues light, and supply is more than ample. We quote: Fancy white, 16c; A No. 1, 15c; No. 1. 14c, with practically no demand for No. 2. Extracted, from 6@8c, according to quality.
BLAKE, SCOTT & LEE.

KANSAS CITY, Jan. 9.—The demand for comb honey still continues light, as most of the retail dealers were stocked up on $2.25 honey before the holidays, two cars of which were sold here at that time. We look for a better market in the near future, and quote: Fancy comb, 24-section cases, $2.50; No. 1, $2.25. Extracted, white, per pound, 6@6½c; amber, 5½@6c. Beeswax, No. 1, 28@30c. C. C. CLEMONS & CO.

CINCINNATI, O., Dec. 19.—Comb honey is now coming in more freely, and prices if anything have moderated a little. The sales made and prices obtained were for No. 1 fancy water-white comb, 12@13½c; single cases, 14c. Extracted is sold as follows: White clover, in barrels, 6½c; in cans, 7½@8c; amber, in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c.
C. H. W. WEBER

PHILADELPHIA, Jan. 9.—The market is unchanged from our last quotations, and trading light. We quote: Fancy white, 15@16c; No. 1, 13@14c; amber, 11@12c. Extracted, white, 7@8c; amber, 6@7c. Beeswax, 26c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

CINCINNATI, Dec. 30.—Since our last report was published, the price of extracted honey has advanced, no doubt acting in sympathy with the sugar market. We quote amber extracted in barrels at 6@6½c; white clover, in barrels and cans, 6½@8½c. Fancy comb honey, 13@14c. Beeswax, 28c. THE FRED W. MUTH CO.

ALBANY, N.Y., Dec. 26.—Comb honey is moving off very well considering the heavy receipts and cold weather. Prices not as high as early fall, as usual, but very good yet. Fancy white, 14@15c; No. 1, 13c; mixed, 12@13c. Buckwheat, 11@12c; mixed, 10@11c. Extracted, dark, 6@6½c; light, 6½@7c. Beeswax, 28@30c.
H. R. WRIGHT.

SAN FRANCISCO, Jan. 4.—White comb. 1-lb. sections, 11½@12½c; amber, 9@11c. Extracted white, 6@6½ cents; light amber, 4½@5½c; amber, 3¾@4¼c; dark amber, 3@3½c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

Market is quiet and not noteworthy for strength. Although stocks here and throughout the interior are light, there is little inquiry, either for shipment or on local account. There is strong probability, however, that the spring trade will absorb the light stocks remaining.

NEW YORK, Jan. 9.—The market on comb honey is decidedly dull, and while there is no stock of dark and buckwheat to amount to much, all grades of white honey are plentiful, and for the present we cannot encourage shipments. We quote fancy white at 14c; No. 1 at 13c; No. 2 at 11@12c; buckwheat at 10c. Extracted honey is in fair demand, with abundant supplies and a weakening tendency is noticeable in the market. We quote white at 6@6½c; light amber at 5½@6c; dark, 5@5½c per pound; Southern at 52@55c per gallon. Beeswax, 29c.
HILDRETH & SEGELKEN.

87½ Percent Saved
In mortality to those insured in the
TOTAL ABSTINENCE DEPARTMENT
OF
Security Mutual Life Insurance Company
EACH POLICY HOLDER is entitled to a Bond issued by the National Total Abstinence League.
YOU may hold a policy and BOND.
General and special agents wanted. Address,
3D28t A. S. RENNIE, Mgr., 614 Marquette Bldg., Chicago, Ill.

Here's what they say about our New Catalog.

If you wish to be abreast of the times send for one FREE on application. . . . . .

Higginsville, Mo., Dec. 30, 1904.
G. B. Lewis Co., Watertown, Wis.

Gentlemen:—We have this day received your retail, wholesale and jobber's price-list, also catalog. Permit us to congratulate you on your catalog. We do not hesitate to say it is the most elegant bee-catalog ever published. We thank you for all above items of interest.

Yours truly, Leahy Mfg. Co.

Cincinnati, Ohio, Dec. 30, 1904.
G. B. Lewis Co., Watertown, Wis.

Gentlemen:—We are in receipt of your new catalog and beg to say it is fine and excellent. Yours truly, Fred W. Muth Co.,
Fred W. Muth, Pres.

Hastings, Nebr., Jan. 16, 1905.
G. B. Lewis Co., Watertown, Wis.

Gentlemen:—Your catalog is certainly splendid and a credit to your firm. Wishing you a prosperous year, I beg to remain,

Respectfully, Chas. Winkler.

Kenton, Ohio, Jan. 5, 1905.
G. B. Lewis Co., Watertown, Wis.

Gentlemen:—Your catalog duly received and we wish to thank you for same. It certainly is the most attractive and the easiest to understand of any that we have ever seen, and we think it will draw trade from the fact that a bee-keeper can so readily find what he wants. Norris & Anspach.

Havana, Cuba, Jan. 4, 1905.
G. B. Lewis Co., Watertown, Wis.

Gentlemen:—We have also received a sample of your new catalog that you have published, on which we wish to extend our congratulations; it is undoubtedly far ahead of any catalog published of its kind. We would be greatly obliged to you to have you send us 100 or 200 of these as we think our English-speaking trade would appreciate them. Yours truly, C. B. Stevens & Co.

San Antonio, Texas, Jan. 2, 1905.
G. B. Lewis Co., Watertown, Wis.

Gentlemen:—Your catalog is fine. Southwestern Bee Co.

BEE PRANKS.

We take pleasure in presenting to the public the first edition of our little book entitled "Bee Pranks". This pamphlet is compiled from clippings taken from newspapers published all over the United States, and therefore gives as nearly as possible complete and authentic daily record of common, uncommon, strange and unique happenings in the busy life of the bee during the year just passed.

The chief value we claim for the book is the undisputed fact that nowhere else will or can be found as varied a collection of interesting events in the life of this little insect, anecdotes, humorous as well as serious, mingled with practical information.

In this modern age there are few events of importance which are not chronicled in the newspapers; they seldom appear anywhere else and are read only in that section of the county local to the paper in which they appear.

At no little expense have we been able to gather together news items pertaining to the bee which have appeared in almost any and every paper published far and wide. You will agree with us many are wonderful, some sad, some humorous, but all interesting. They are not fiction, but chronicled facts.

We shall be pleased to send this book postpaid to any address for 12 cts. in stamps, or WE WILL GIVE IT FREE for the names and addresses of 5 bee-keepers in your vicinity. THEY ARE GOING FAST and this offer holds good only while they last.

G. B. LEWIS CO., Manufacturers of Bee-Keepers' Supplies
Watertown, Wis.

American Bee Journal

OUR TOIL DOTH SWEETEN OTHERS

MASSACHUSETTS AGRICULTURAL COLLEGE.

45th Year. CHICAGO, ILL., FEB. 2, 1905. No. 5.

SOME APIARIES LOCATED IN THE GREAT SOUTHWEST.
(See page 84.)

FOR 1905.

We are always studying how to improve our goods. That's why we are leaders. No detail is too small for improvement. No expenses are spared to experiment and build new machinery. There are many advantages in buying Root's Goods. You can't get good goods cheaper; you save freight and time, and you are always sure of the very latest in apiculture. Below are our improvements for 1905.

Honey Extractors

The honey extractors of 1905 have steel stampings in many places where gray iron castings were used formerly. These stampings are so ribbed and braced that the construction of the baskets will be much stiffer than formerly with no possibility of any of the parts breaking.

Wire Imbedder

Our new spur wire imbedder is a great improvement over the old one. Although it costs 20 cents and the old one sells for only 10 cents, it is 10 times better. It does very neat, pretty work and the special construction of the teeth with the groove makes it easy to follow the wire during the process of imbedding.

Perforated Zinc

A complete new set of dies and press have been made during 1904 for turning out perforated zinc, so that our 1905 product will be even better than before.

Smokers

Some minor improvements have been made in our smokers by which the blast will be increased and the general construction throughout stiffened. A very neat and strong brace is placed in such position that the legs supporting the cup or stove can not be twisted or bent out of shape without crushing the whole smoker.

Fences

Some of our fences for the supers will be nailed as well as glued. This will enable the user to clean off the propolis by immersing them in boiling water, a fact which will be appreciated by many.

Root's Automatic Extractor

✣

We have got it at last. An automatic reversible honey-extractor that will reverse the pockets while in motion by simply pressing on a lever. The extractors are no larger than the Cowans, and reverse without bang or slam, provided the directions are followed. They are equipped with street-car band-brake, noiseless gearing, gearing on top of the reel out of the honey, and out of the way of putting in and removing the combs. We have the 4-frame size all ready for delivery. Six-frame, 8-frame, and 2-frame sizes will be ready shortly. Price will be only $2.00 above the regular price for 2, 4, 6, and 8 frame Cowan extractors, respectively.

Wax-Tube

The Van Deusen wax-tube fastener is made of one piece of brass tubing drawn down to a point. It is a much neater and better tool than the one sold last year.

German Wax-Press

The German wax-press is now so improved that it has a threefold use. First, as a wax-rendering device and press to squeeze out slumgum clear of wax. Second, as a press for squeezing honey out of cappings, bits of burr-combs, chunk honey and the like. Third, as an uncapping can for uncapping combs preparatory to extracting. This last feature will prove invaluable because the cappings will drop into the basket, and when the uncapping is done the cappings can be squeezed until they are dry, the honey running out at the spout. Three machines for the price of one. And our price has been reduced to $12.00.

Bee-Veil

Our bee-veil for 1905 will have rubber cord sewed in the bottom edge so that the top as well as the bottom will be elastic. If the directions are followed the edge of the veil can be made bee-tight around the waist or coat, effectually protecting the wearer. We will still furnish veils with silk binding and when called for can supply them.

Cover

The Excelsior cover will look about the same as before except that its construction will be simplified and strengthened, making it better in every way to withstand extremes of hot and dry weather. It will be used on all our hives including the Danzenbaker, as it has stood the test of many years, and for a general purpose cover we know of nothing better.

Ask for our Catalog. A postal brings it.

THE A. I. ROOT COMPANY,

FACTORY AND EXECUTIVE OFFICE,

MEDINA, OHIO.

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Establisht in 1861

AMERICAN

The Oldest Bee-Paper in America

BEE JOURNAL

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

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GEORGE W. YORK, Editor. CHICAGO, ILL., FEB. 2, 1905. Vol. XLV.—No. 5.

Our toil doth sweeten others

Editorial Notes and Comments

"Bee-Keeping in the Southwest."

Over a year ago we had some correspondence with Prof. Louis H. Scholl, of Texas, concerning the preparation of a series of articles on bee-keeping in his section of our great country. Finally, about two months ago, he wrote us that he would now have the time to write them, and in this issue will be found the first one under a heading of his own selection, "Bee-Keeping in the Southwest". Our Southern readers especially will be interested in Prof. Scholl's articles, though they will be profitable for all.

Punic or Tunisian Bees.

The character of these bees is a live topic nowadays among the correspondents of the American Bee-Keeper, the editor having received "numerous comments, aggregating nearly 100 pages of manuscript, together with lots of letters from those who have tested this race of bees". Whether they be good or ill-tempered, there can be no denying their ability to stir up ill temper among the disputants, for the editor says that much of the matter must be rejected "owing to its somewhat vindictive tone".

Nominations for Officers of the National.

Wm. M. Whitney, of Wisconsin, does not favor the plan of selecting for candidates the two having the highest number of votes for nomination. He also says:

> "It seems to me that as many States prominent in bee-keeping as possible should be represented on the Board of Directors, and it might be well for each State organization to indicate in some way the wish of the members in each locality; but voters to exercise their own free will in making choice of candidates for any office to be filled."

Perhaps it would be a good idea for State organizations to take a vote on nominations, provided the members are also members of the National, and yet it would be only a duplication if such members also sent in votes for nominations to the General Manager according to the present custom.

The idea that the nominees should, so far as possible, fairly represent the different sections of the country is based on that jewel "fair play". Some might say to increase the number of directors so that each State could be represented. But that would make the body a very unwieldy affair, say others. Indeed, some of the Board say the number is now too great for rapid expedition of business. There is perhaps never an actual meeting of the Board with all the members present, and the business is chiefly transacted by mail. Would it be an improvement to return to the smaller number of previous years? Could or could not three or five members do the business as satisfactorily as twelve or twenty? These, and other questions, are fair subjects for discussion.

One thing that makes it less important that many different sections should be separately represented is the fact that the interests of the different sections are generally identical. Protection against unjust litigation is the same in Maine as in California, and the same may be said of adulteration and other matters. However, we believe that it would be an advantage to have the members of the Board of Directors in as many different parts of the country as possible.

Drone-Brood Exempt from Foul Brood.

Something which has perhaps not been heretofore mentioned on this side the water is given in the British Bee Journal, which says:

> "It is a curious fact that dead drone-larvæ, even when taken from a hive affected with foul brood, never show the marked characteristics—either in color or ropiness—such as are seen in worker-brood from a diseased colony. It would almost seem as if the bacillus does not propagate or thrive in the former as in the worker-larvæ. Anyway, we can only record the fact as we have found it, after an experience probably as great as that of any one in this country."

A Question-Box Convention Program.

That's the kind the Chicago-Northwestern is. Not a single paper was read at the last meeting. It was simply question after question, and one lively discussion following another. Such program is very easy to prepare, and when once "ignited", and the "flames" properly directed or controlled, it makes just the livest and warmest kind of a meeting of bee-keepers.

Such program has many advantages, and scarcely any disadvantages. The secretary is not overworked in preparing it before the meeting. Every one present has only to hand in any question that he desires to have discussed, when it is read, and the opinions thereon are forthcoming at once.

It also furnishes an ever fresh and sometimes surprising program. No one knows what is coming next until the next question is read by the presiding officer. Often the questions are so interesting that several members want to give their experiences in concert. Then the president or chairman needs only to say which person can have the floor first, when the life of the shorthand reporter is saved—or at least he (the reporter) is saved from a useless attempt to write down a senseless jabbering.

We wish to commend the question-box program to other conventions of bee-keepers. We believe the Chicago-Northwestern is the only one that uses it practically exclusively. The old Northwestern that met annually in Chicago for so many years previous to 1891, never had any other kind of a program. It also never had but one president during its existence. And he was Dr. C. C. Miller, the original question-box-program man. He still helps as a member to make the Chicago meetings so interesting and practical.

Some members of the Chicago-Northwestern Association attribute its very successful meetings to its special kind of program. But it has no patent on it. Other conventions can copy if they so desire, without being in any danger of infringement proceedings.

Miscellaneous News ÷ Items

The British Bee-Keepers' Association has 332 members. For the year 1903 its income was $2150.

* * *

Sir A. Conan Doyle as a Bee-Keeper.—It is reported in the British Bee Journal that the author of "Sherlock Holmes" is to cease writing after this year, retiring to some quiet country place where he will "go in for bee-keeping".

* * *

Mr. P. B. Ramer, secretary of the Fillmore Co., Minn., Bee-Keepers' Association, wrote us Jan. 20 as follows:

> "We have just closed the third annual meeting of our Association, and each one excels the former ones in the interest taken. Our Association is proving to be a permanent good to the bee-keepers of this section. Those who fail to attend bee-keepers' meetings do not realize what they are losing."

* * *

The Paid-in-Advance Subscriber.—A country newspaper speaks of a man who always paid for his paper a year in advance. As a reward he was never sick in his life, never had a corn on his toes, or the toothache; his potatoes never rot, the frost never kills his pears, his wife never scolds, and he has succeeded in serving three terms on the school-board without being criticised.

We do not know whether such happy results would follow paid-up subscribers to the American Bee Journal or not, but it wouldn't do any harm for many others to try it.

* * *

The Michigan State Convention will be held at Grand Rapids, Feb. 23 and 24. We have received the following for publication from W. Z. Hutchinson, president of the Association:

PRIZES ON HONEY AT THE COMING MICHIGAN CONVENTION.

As an encouragement to attend the coming State convention of bee-keepers at Grand Rapids, and, at the same time furnish some valuable object lessons to some of the members, the following prizes have been offered:

For the best 10 pounds of comb honey, quality and manner of putting up for market to be considered, A. G. Woodman, representing the G. B. Lewis Co., will give $3.00 worth of supplies; for the second best lot, a Bingham brass smoke-engine worth $1.75. Mr. Woodman also offers similar prizes for the best 10 pounds of extracted honey, quality and manner of putting up for market to be considered.

M. H. Hunt & Son offer $3.00 worth of supplies for the best 10 pounds of extracted honey, quality and manner of putting up for market to be considered; a Jumbo Corneil brass smoker as a second prize; and a Bingham honey-knife as a third prize.

The A. I. Root Co. offers a complete Danzenbaker hive nailed and painted, ready for use, value $3.10, for the best 10 sections of honey produced in a Danzenbaker hive; for the second best lot, a copy of the "A B C of Bee-Culture", worth $1.20; for the third best, one year's subscription to Gleanings, worth $1.00.

In addition to the above, the Bee-Keepers' Review will give a year's subscription to the Review to every man who wins any of the other prizes.

It will be seen that a bee-keeper with a nice case of comb honey, or 10 pounds of fine extracted, might, considering the reduced rates on the railroad, come 100 miles and receive prizes enough to pay all of his expenses. Come and bring your honey. If you don't bring it you may be chagrined to see a poorer lot than yours take first prize.

It may be of interest, also, to know that the National Biscuit Co. will make a display of their goods that are made with honey.

All being well, we expect to be present at this convention, and hope to meet many friends of the American Bee Journal. Not having been invited to offer any prizes accounts for the omission of the American Bee Journal from the foregoing paragraphs.

* * *

Some Southwestern Apiaries are shown on the first page this week, the originals of which were kindly sent to us by Prof. Louis H. Scholl, who begins a series of articles this week on "Bee-Keeping in the Southwest". The following are brief descriptions of the pictures as noted on the back of each photograph:

1. M. A. Salazer's apiary on the Nueces River, La Salle County, opposite a beautiful lake. Catclaw, mesquite, guajilla, white-brush and others are the sources of honey.
2. Where fine honey is produced—mesquite, catclaw and guajilla. Bottom-boards not present in this yard. Hives on rims, and earth the floor. Works all right there. Dry, you know.
3. 180 colonies kept by W. B. Morse and wife on the "waheah" plains of southwest Texas, which brought in much cash.
4. Apiary of J. N. Long, of Frio Co., Tex., where Mr. Sbisa used to get his honey; 140 colonies owned by a man who makes his own hives and fixtures, and who has made some money out of the business.
5. Another apiary in southwest Texas. Just moved to the new location. Some 80 colonies, and the "rims" still lying on the ground, just taken off, with screws. Mesquite and persimmon trees in the yard, and other honey-plants.
6. 360 colonies in one yard—the most I ever saw in one place in Texas. On the banks of the Nueces. Thousands of acres of guajilla, mesquite, and cacti in the distance.
7. A southwest Texas apiary with mesquite and white-brush all around—honey-yielders—and the bees have only to go over the fence and fetch it into the hives.

* * *

A Very Successful Meeting of the Kansas State Bee-Keepers' Association was held in the State Capitol building at Topeka, Jan. 10 and 11. A bill was prepared which will be presented to the Legislature, asking for a law to appoint foul-brood inspectors for the different counties. The old officers were all unanimously elected as follows: President, Dr. G. Bohrer; vice-president, E. W. Dunham; secretary, O. A. Keene, of Topeka; and treasurer, J. J. Measer.

A Queen-Bee Free as a Premium.—We are now booking orders for untested Italian queens to be delivered in May or June. This is the premium offer: To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us one new subscription with $1.00 for the Bee Journal a year. Now is a good time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.

Contributed Special Articles

No. 1.—Bee-Keeping in the Southwest.

BY PROF. LOUIS H. SCHOLL.

BEE-KEEPING in the Southwest differs very much, when taken as a whole, from Northern bee-keeping. Other methods and systems of management are employed. The methods of procedure in the beginning of the season are different from those practiced in the North, and so as to the outcome at the end of the season's work. All this is due to the difference in conditions, the change of climate, with entirely different seasons and another variety of honey-yielding flora. The seasons are not like those of the North; the winters are shorter and the summers longer, and there is quite a difference in the temperature.

THE LENGTH OF THE HONEY-SEASON.

The question has often been asked, as to how long the honey season lasts throughout the year in the Southwest; that is to say, from the time the bees begin to work on the earliest blooms until they stop working on the latest ones. To this my answer has often been, that it depends a good deal upon locality, but in my own locality at home (Brazos County), 13 months would be about right! This has, however, nearly stunned the questioner in every case; yet this is really true, for if we begin with the first appearance of the bloom of our mistletoe, which begins often about the first of December, lasting well into January, it is followed by many other flowers more or less all through the entire season. The last of these upon which the bees work, and which ends up the season, is cotton. This blooms from the latter part of June until frost, and often this does not come until in January. So I have seen bees work on cotton as late as that, and as they had begun in the months of December a year before, it can easily be figured out. In other words, the flow extended into three different years.

This, of course, does not occur every year, for sometimes the seasons are shorter, and the winters colder, yet the bees fly more or less the year around, and are only kept in the hives for several days at a time by cold weather.

Neither will anybody surmise that the above would mean the length of the honey-flow, or that there was a continuous honey-flow during this entire length of time. Not at all. While there is *some* honey coming in more or less all the time, yet the real honey-flows for the surplus are much shorter, and mostly far between.

THE TIME OF THE PRINCIPAL HONEY-FLOWS.

During early spring there are, in my immediate locality, a great many early bloomers that yield both honey and pollen in abundance for brood-rearing, and colonies build up strong and become very populous very early in the season, if the right kind of hives and management are used. There must be plenty of room, and in such shape as will be most essential for the colony. This is simply mentioned here because without it the colonies would not become most populous, no matter how good the early spring bloomers and the yield.

If rains have been plentiful the previous fall so that the mesquite tree, and all other trees and shrubs, have accumulated an abundance of sap upon which they thrive during the following season, then we may expect a heavy flow from the mesquite early in the season, in April. Unless a late frost injures the bloom, or a late spell of cold weather hinders the secretion of nectar, or keeps the bees in the hives, we may expect a good crop of surplus honey, especially if the weather and other conditions are favorable The flow lasts from a week to ten days, and often from 25 to 100 pounds of surplus honey per colony is stored. This shows the importance of having the strong colonies referred to in a previous paragraph.

This refers more to central Texas. In southwest Texas this flow is preceded by a good and a heavy flow from catclaw. Occasionally, however, this is cut short by late cold weather on account of its earliness.

Farther west, guajilla (pronounced "waheah") covers the country over thousands upon thousands of acres of pasture-land, and it yields an early and abundant flow of nectar. This honey is of a water-white color, and the flavor is one of the mildest produced in the State. It has also achieved quite an extended reputation, and the supply is not equal to the demand, the most of the crop being already sold before produced.

In central Texas, again, the mesquite flow in April is followed closely by a flow from horsemint in May. This, when abundant, yields great crops of honey, as high as 700 pounds being once taken from one colony as the product from this source alone. On account of several dry years of late, and a scarcity of seed produced during that time, horsemint is not as plentiful as in former years when it grew so thick over all the prairies that it was often impossible to walk through it.

Where horsemint is not so plentiful, in many localities the prairie marigold (Gailavdia pulchella) follows the mesquite, and sometimes together with horsemint, both coming in May. This, however, is a darker, golden honey, while the others are all of light color. There is no trouble about selling it, however, especially in the extracted form.

In June the second flow from mesquite is of much importance, especially when the early April flow has been light, which is often caused by a previous dry fall. Then the June flow is the heaviest, while, sometimes, it is very light when the early bloom yielded well. Thus, it will be seen that there are two distinct blooming periods of the mesquite tree, two months apart. During the latter ripe beans will be seen together with the flowers on the same tree.

Soon after this cotton begins to bloom, from June 15 to July 1, and lasts until frost late in the season, sometimes yielding heavily and at other times only slowly, depending a great deal upon the weather and atmospheric conditions. From this plant the nectar is not only gotten from its flowers, but there are nectar-glands on the underside of the buds and on the ribs of the leaves which secrete pure nectar.

Sumac yields well in August and September, and extends pretty well over the entire State, hence it should not be omitted here.

In south-central Texas the main flow is from the rattan-vine, which is very abundant especially in lowlands and in the bottom-lands of the large rivers. In early spring this is preceded by many bloomers; along the rivers by willows mostly, and many vines, and by different kinds of oaks and other plants on the uplands, which mostly yield much pollen, and thus aid in building up the colonies.

The rattan blooms in April, and from this source a large amount of honey is procured. It is, however, of an inferior quality to that produced farther west from other sources. It is almost entirely put up in barrels and goes to Northern markets for manufacturing purposes in the large bakeries of biscuit companies.

The yield being so abundant, which makes the crops procured large, results in bee-keeping being carried on quite profitably by the bee-men in that part of the State, even if their product does not rank so well in grades.

In east Texas the flora is entirely different from that already mentioned, and adapted to the more western and those of the arid regions. Here are forests of pines, and many other trees, and among them in many places are linden, or basswoods, and holly, which yield much honey, and large crops are obtained by the few bee-keepers who are located in this range. This part of the State is not yet well settled, hence there are not many bee-keepers, but the number is increasing. The main flow from basswood begins about May 10, sometimes earlier or later.

Besides those mentioned here it will be remembered that there are many other honey-yielding plants that fill in between and help out admirably, sometimes yielding some surplus. Those mentioned are only the principal ones—those from which the great bulk of the crop is obtained.

This will give the reader some idea of the main honey-flows, and how they follow each other. They all come from a natural source except cotton, which is the only cultivated one. Later on, when irrigation is resorted to more, we will add alfalfa.

Brazos Co., Tex.

(To be continued.)

⁂

Cellar-Feeding of Bees—Mailing Honey Samples.

BY C. P. DADANT.

MR. DADANT:—You advise me to feed candy if I have to feed in the cellar. Now, why not feed honey in the comb, if we have it?

Why not feed sugar syrup if we do not have honey? What do you think of sending samples of honey by mail to advertise honey for sale?—W. D. N.

I ADVISE the feeding of sugar candy in the cellar, for two reasons: The first reason is that it is much the easiest way of feeding. If you have the hives piled in the cellar you can still feed candy without disturbing the bees, if the hives are separated from one another only by a 2-inch block. Raise the oil-cloth and lay the cake of sugar candy over the cluster. This may be done without any stir. The bees will reach the candy from the underside, and will perhaps ultimately cover it entirely. It is the nicest way to feed in confinement.

The second reason is that candy excites the bees less than any other food. Candy has so little moisture—they are so slow in absorbing it—that it does not create any excitement. When you give them combs or liquid honey, or even granulated honey—which is really the next best feed to candy—you are likely to excite them more or less. If you want to give them combs, you must either put them in the hive or lay them over the top, and this is more difficult than giving a small cake of candy, which, if rightly made, will last them longer than honey, and will keep them in better shape. Besides, the cake of candy is in more compact shape than combs more or less filled with honey.

And as to syrup or liquid honey, besides the difficulty of giving these to colonies that are piled up on top of each other, there will be more excitement in the hive when the food is reached by the bees. It is very important to avoid causing any unnecessary stir, in the cellar especially, during the winter cold weather, and from past experience it is not to be doubted that sugar candy of good quality is by far the best food.

Yet, if sealed combs of good clover honey are in reach, and can be laid on the top of the combs above the brood without disturbing the bees, this would be a very good method of feeding; but if there is any probability that these combs will be needed during spring to help the bees in brood-rearing, I would by all means retain them and put them away, using the candy until the bees are out of the cellar.

In addition to the gain of leaving the bees undisturbed, it is also more convenient to make sure of the amount of food consumed when sugar candy is used, for the size of the lump can be noticed at any time at the top of the combs, while, if the comb of honey has been emptied by the bees, it will be difficult to make sure of it; and removing it to give another will be sure to disturb the bees greatly.

SENDING OUT SAMPLES OF HONEY.

Now about sending out samples of honey. I believe this would prove more of an expense than the returns would justify. It is well enough to send samples of honey to prospective buyers, but to send the samples broadcast would, I believe, cost more than the circumstances would permit. Yet there may be a way to send samples that would prove inexpensive. Our method has always been to melt the honey and put it up in a small vial about ¾ of an inch in diameter, and with an opening the full size of the vial, for more easy filling. We then put the vial in a block of pine in which an auger-hole has been bored of about the size of the bottle. This is also corked, and then wrapped in paper before mailing. In this way we have never had any trouble.

Granulated honey may perhaps be put up in a cheaper way, but unless it is put up in a water or honey tight package, it is likely to soil the mail-matter should it be exposed to heat. Sometimes the mail-sacks are laid in close proximity to a stove, and very thick granulated honey might in an occurrence of this kind change to the liquid form and leak out, unless put up properly. On the other hand, so many people have no knowledge of granulated honey that it would hardly be the right thing to send samples of granulated honey without a lengthy explanation, which would perhaps not be sufficient. We have always found it necessary to explain the condition of granulated honey in person until the customer is familiar with it.

Hancock Co., Ill.

Some Facts About Honey and Bees.—This is the subject of an article written by Mr. J. E. Johnson, and published on pages 581–82 of the American Bee Journal for Aug. 25, 1904. We have republished it in 4-page leaflet form for general distribution, and furnish it, postpaid, at 35 cents per 100 copies. Send all orders to the office of the American Bee Journal.

Convention Proceedings

Report of the Washington State Convention.

On Wednesday morning at 10 o'clock Pres. Jesse W. Thornton called the Washington State Bee-Keepers' Association to order at the City Hall in North Yakima, Wash.

Mrs. Legh R. Freeman was made secretary *pro tem.*, and read the minutes of the previous meeting.

Mrs. Susan Thornton, the treasurer, was at her desk and received the annual dues from a number of old and new members.

Article II of the Constitution was so amended as to read: "The object of this Association shall be the promotion of scientific bee-culture by forming a strong union among bee-keepers, the purchase of supplies, the marketing of honey, the necessary legislation, and the protection of the industry".

J. P. Berg, chairman of the committee on the purchase of supplies in carloads, reported that they were still investigating and getting bids from the different manufacturers. He requested that all persons that are members, or who desire to become members, report to him at once at North Yakima, the quantities of supplies that they need.

Interesting discussions were participated in by Bert Stewart, Robert Cissna, H. H. Cole, Isaac Hayes, J. P. Berg, W. P. Clark, P. A. Gildea, Legh R. Freeman, the president, secretary and treasurer, at the end of which the president appointed Legh R. Freeman, Isaac Hayes and Bert Stewart to secure space at the Lewis and Clark Exposition, and to interest the bee-keepers' associations of the States of Oregon, Idaho, and California to co-operate with the Washington Association in making a grand display of honey, bees and the by-products, and preparing literature and circulating it; and seeing to it that a booth is arranged at which the public shall be feasted on honey, hot waffles, etc.

The president also appointed Mrs. Susan Thornton, P. A. Gildea, H. H. Cole, Anson White, Robert Cissna and W. P. Clark a recruiting committee for the purpose of securing as many new members as possible throughout the State. The committee will solicit membership among business men who may be disposed to contribute one dollar for the purpose of aiding in making a display at Portland.

After a recess for lunch the secretary read letters from the various firms quoting prices for supplies, and the committee was instructed to proceed with its work.

Isaac Hayes and Legh R. Freeman were directed to prepare a paper to be read at the annual meeting of the Yakima County Horticultural-Association in February, showing the advantages of bees in the orchard, and the proper time to cut alfalfa with reference to securing the nectar in the blossoms, and also the feed-value of alfalfa if allowed to bloom.

The president was instructed to assign to various members subjects which they are to reduce to manuscript and read at the February meeting; and he is to arrange for toasts and responses at the banquet which will follow the three days' session. At this banquet honey is to be served in many ways that will tempt the appetite.

MRS. LEGH R. FREEMAN, *Acting Sec.*

Co-operation at the Minnesota Convention.

The Minnesota Bee-Keepers' Association held its annual convention at the First Unitarian Church in Minneapolis, Dec. 7 and 8, 1904.

After an invocation by Rev. J. H. Kimball, George W. York, Ernest R. Root, Fred and Bessie Dittmer, and a representative from the G. B. Lewis Co., were introduced.

The minutes of the 1903 meeting were read and approved.

As considerable interest of the meeting centered in a Committee on Co-operation, appointed in 1903, and an amendment to the Constitution proposed by this committee, a brief report of the proceedings is here given, so far as they related to the subject of co-operation.

That part of the minutes of the 1903 meeting, referring to the appointment of the committee, read as follows:

"The appointment of a committee on co-operation was objected to, and the president named a committee with the understanding that it is a separate organization, and not a part of the Minnesota Bee-Keepers' Association."

The avowed objects of this committee were to investigate the subject of honey-prices, with a view to their betterment by means of co-operation, and to obtain, if possible, a reduced scale of prices on apiarian requisites.

At the proper time the chairman of the Co-operation Committee made his report, but the president ruled that, on the showing of the minutes read and approved, the committee had no standing, and their report could not be heard. On this rule being objected to, it was sustained by a vote of the convention.

Shortly after their appointment it seemed that the Cooperation Committee was being opposed, and in order to ascertain its status, the chairman wrote to the secretary of the Association, asking for a copy of the minutes of the 1903 meeting referring to the appointment of his committee. The secretary wrote as follows: "The only reference in the minutes of the annual meeting to the Committee on Co-operation appears to be the following: '*A committee on organization was appointed as follows*'. Then follow the names and addresses."

As there was thus a considerable difference between the actual minutes and those read at the present meeting, W. R. Ansell moved an amendment of the minutes to make them agree with the notes taken at the 1903 meeting. By arrangement, consideration of this motion was deferred till a later stage in the proceedings.

Meantime, an amendment of Article II of the Constitution, notice of which had been mailed to all members, was proposed by Mr. Ansell, and seconded by F. A. Gray. Article II says: "The object of this Association shall be the promotion of scientific bee-culture by forming a strong band of union amongst bee-keepers".

As proposed, the article would read: "The object of this Association shall be the promotion of scientific bee-culture, *and of the general interests of bee-keepers*, by forming", etc.

Mr. Ansell said: "This amendment would seem necessary from the action of the Executive Committee in deciding that co-operation is inconsistent with the objects of the Association, which, according to Article II, are of a purely scientific nature. It even seems necessary in order to legalize our present program, where such papers as 'Poultry as an Adjunct to Bee-Keeping', 'Insuring Bees', 'Selling Honey Through Grocers', 'Honey Exhibit at the State Fair", etc., find place. The Committee on Co-operation has gone to considerable pains and expense, and has succeeded in making arrangements with a certain manufacturer of supplies for prices ranging from 25 to 30 percent less than the retail prices of some others. And now we are told that the Association can have nothing to do with co-operation, because co-operation is not 'scientific bee-culture'. I hold that an association of this sort, whatever it is nominally, is not in practice a purely scientific society, and that it should be able to initiate any sort of work which is in the general interests of its members. In other words, it is to legalize its past and present action that this amendment is sought, and not to revolutionize its character."

Messrs. F. A. Gray, S. Lindersmith, Wm. McEwen, H. V. Poore, and Mrs. J. B. Thompson, and others, spoke in favor of the amendment. Dr. Jaques, Wm. Russell, Rev. J. H. Kimball, and others, spoke in opposition.

After Scott Lamont had pointed out that the amendment, if carried, would entail an expense of $25, both motions for the amendments, respectively of the minutes and of the Constitution, on being put to the meeting, were lost.

A MEMBER.

Honey as a Health-Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food", written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey". It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey the more honey they will buy.

PRICES, prepaid—Sample copy for a two-cent stamp; 50 copies for 70 cts.; 100 for $1.25: 250 for $2.25; 500 for $4.00; or 1000 for $7.50. Your business card printed *free* at the bottom of the front page on all orders for 100 or more copies. Send all orders to the office of the American Bee Journal.

Our Sister Bee-Keepers

Conducted by EMMA M. WILSON, Marengo, Ill.

Cords of Helpfulness—Influence of Locality.

DEAR MISS WILSON:—Please accept my personal thanks for your most welcome and appreciated card of New Year's greeting to our bee-keeping sisters. The cordial, appreciative, encouraging words of good cheer struck a responsive chord in our hearts. I'm sure all who read your words felt in very truth that it would be a treat indeed to meet face to face with our chieftainess, and clasp hands and have a good old-fashioned chat with these ladies, who, during the past year, have helped to make our corner of the American Bee Journal so very interesting and helpful.

This is a great age in which we are living. I suppose there has never been a time when the individual, as an individual, was of so much account, or received so many helps to make life seem worth living. It is an age when the brotherhood of man is accepted as a fact, and acted upon in its deepest, most affectionate, and sympathetic sense as never before. Many cords are stretched out to draw us—even the most isolated—into a close, familiar touch with each other, and the great work of regeneration steadily goes on about us.

One of these cords is this department of ours, in which we catch glimpses of each other's lives and interests and experiences, as we would in no other way. We, who are in the heat of the battle, know so well what our sisters' victories mean, and at what a price they are bought. And as we read, words of praise and encouragement spring unbidden to our lips, and if they sometimes fail in expression at the pen-point, it is only because life is too strenuous and its duties too arduous to allow the time. I have thought, after reading suggestive points in some of our sisters' letters, that it would be a good plan to write on a convenient pad the comment or question it gives rise to, and when a leisure hour comes to "talk it out". It seems as though this would be a good scheme, one which most of us may adopt, and one that would be helpful and encouraging to you.

Another cord is the photographs of those whose writings and advice have helped us over many hard spots. It is very pleasant to know how they look. It brings them very near, and our personal interest and liking receives a decided impetus. Though we know that, like our genial Dr. Miller, they are "younger and better looking" than the cuts show, we view their pictured faces with complacency, and feel proud of so nice-looking, intelligent, and refined a body of representative apiarists.

I have felt that in caring for our bees we do not sufficiently take into consideration the locality. We frequently read of work being done in yards which would not be practicable in our own. There is a great variety of climate in American apiaries, and it seems as if we do not always get as much benefit from advice, instruction, and our bees as we would could our atmospheric and climatic scale be our guide. It is quite a help to know where our writers live, and what kind of weather they have to adapt their apiaries to. In one respect I find myself out of harmony with many of our bee-yards. It is in regard to our fall work. Practically we have thus far in our work been unable to do any of the manipulating for winter that others find so important.

Our yard is situated near the north end of Lake Champlain, about 8 miles from the Canada line. Our supers are on for the buckwheat bloom until the frost kills it and most other bloom, and from then until snow flies there is an an almost unbroken sequence of leaden skies above us, and high, cold winds over us, which sweep down from the Adirondacks or over the lake from the mountains of Vermont. The temperature is very changeable, a drop of 40 degrees in an hour being quite a common occurrence. As a rule, we have to hustle off our supers with chilly fingers, the honey out of the combs before it congeals, and make the hives warm and tight in a hurry.

There is scarcely a single day after that till the following spring when it is safe to open the hives and make any examination as to the condition of the interior. If it is attempted more harm than good follows, as great risks are run in starting the bees to robbing and in chilling the brood. Therefore, I do all the manipulating for the year before the supers go on, and use only the honey from the supers, never taking it from the hives. Usually only one or two colonies die in the cellar, though I sometimes lose quite a number from spring dwindling. I even up the food in the spring, and do not find that any honey is wasted. The period from fall to spring bloom is a long one, and the weather much of the time, even then, is unfavorable for flights.

I had a rather strange experience in our apiary the past fall that I will try to describe, and get your advice about, when I write again. I wish you individually, and our sisters collectively, a Happy New Year, and many of them.

Clinton Co., N. Y., Jan. 5. FRANCES E. WHEELER.

Thank you very much for your encouraging words. I assure you they are most thoroughly appreciated.

Your suggestion about the use of a pad is an excellent one, and I sincerely hope that many of the sisters will put it in practice. While reading jot down a memorandum of this or that, and then, when you have the leisure, write out the thoughts and send them in for our department.

It is true localities differ, but I never knew before that there are localities where there are no warm days after buckwheat frost.

A Champion for "Our Sister Bee-Keepers".

My sister Mary's bees is asleep in the cellar. They don't try to sting, nor even buz. She gives us honey on our bred insted of that rancid packt buter. My, but it's sweet! I like it. Mary used to say we needed a "Woman's Bee Magazine", until one column of "Old Reliable" donned the femal atire. Now she wishes so many more women with ether scientific or practical education would write for Mis Wilson that you'd hav to enlarge her space. Pa's ben readin' it, too. He says in thes days when so meny men refus to suport a family, lots are mean enuf to find fault if a woman takes the job; and meny wimen are ferful of having bond-chains riveted on them by matrimony, so worthy wimen are compelled or choose to ern their own living, and it is plesing to see some one come to the front and advocate woman's rites in apicultur with so much practical ability as Mis Wilson is doing it.

I'v ben reading all the papers, too, and I think pa's rite. She keeps her field clear of pretentius "weeds". Not only us little boys does she lug out, but if a big "Hasty" man, not easy caut, gets in she gets after him with her pointed cane, and big bitin' and "Eaton" dog, with his doggies and "Doggetts", and chases him back into his own big field. Ha a-a! as he gits over the fence with his ears hangin' he glances back and thinks aloud, "I'm lickt".

Womantown, Dec., 1904. JOLY JO.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

NEW "HEADS" MAKE HIS HEAD SWIM.

My "head" swims, Miss Ayebejay. Hardly got reconciled to the one you gave me last before you whisked away my honey-knife and dealt me a new caput. Hence, this inclination to "put a head" on somebody. Momentarily expecting to open the Journal and find myself reading up and down like a Japanese conundrum.

SELECTING LARVÆ FOR QUEEN-REARING.

Only about 15 of the experts seem to be competent on Ques. 19. It is quite important to know whether there is serious danger of too old a larva being chosen queen by a colony suddenly made queenless; yet few of the respondents cover exactly that point. At least 9 of the 15 allude to the great variability of the age chosen. Only about 5 out of the 15 express confidence that newly-hatched larvæ will be chosen usually. More would have done so had they covered that point perhaps. The true inwardness of this difficult question depends upon another question still more difficult. For the first 48 hours of life is the food identical for young worker and young queen? I suppose a good many would answer: Practically, yes—and therefore it makes no particular difference whether the young queen is "elected" at hatching or at 48 hours old. I take it that another good many (and with some hesitation I will cast my lot among them) entertain doubts about that. Still possible that the young worker 3 hours old, and the young queen 3 hours old, may not be fed *exactly* the same food. Page 837.

BEE-CRANKOSITY.

(Abstract noun.) A disease. Sometimes becomes chronic; and has been known to persist 30 years. Page 838.

THE EYES OF BEES AND HOW THEY WORK.

Prof. Cook does quite as well for us in giving us the generalities about bees' eyes as he would have done in going into minute matters. As he hints, two kinds of eyes so diverse suggest difference of function. But it seems no one stands ready to prove that yet. And as to *what* the difference of function is, if any, few even propound a working theory that sounds plausible. That animal eyes are round, and insect eyes much elongated I should guess is merely the natural result of the inevitable smallness of the latter. The laws of optics demand a space between lens and focus that easily can be had in a large eye of any shape, but in a minute eye only by elongation. Interesting to find that general structure, even to the humors, is similar to animal eyes. I had somehow got the idea that the sections of a compound eye were empty like telescope tubes. And so the *retina* shows more decided differences that the other parts do. Prof. Cook alludes to the apparent fact that bee-vision is not keen. I have often thought of this. The fact that hungry bees will never rush to food *on the sight of it*, as pigs or chickens do, seems to be proof positive on that point. On the other hand, a bee on the war-path sees well enough (and quickly) to discriminate between clothed surfaces and bare skin, and to select eye-lids, and lips, and ear as favorite places to sting. Or will much of this turn out to be super-sensitive smell? Sight hardly suffices to select the thin places of a glove in preference to the thick places, and bees will do that nicely. It seems the observers have it *almost* proved that each section of a compound eye has *fractional* vision instead of operating as an independent eye. Each facet takes a part of the object, and the optic never puts the parts together. Curious. I'll guess that the overlapping of images doesn't do much harm, and that the fractions are not put together quite as sharply as the sections of a patchwork quilt. Page 838.

SHOOTING SWARMS OFF TREES.

My inner consciousness tells me, Mr. Stolley, that no man alive can *always* tell the spot where a shot-off branch will fall. Swings hither and yon before it starts; and the amount and direction of the swinging depends upon too many things—the completeness of the severance for one. Have the hive all ready and near by. Bring 'em down first; and then set the hive just at the most promising spot. Of course, Mr. S. is thinking of blowing completely away an inch or so of the branch. Perhaps he can do it—sometimes. The tall trees that most bother me are basswoods; and sometimes the bees break the limbs off themselves and fall. Alas, it's the exceptional and not the usual luck for a cluster to form where it has clear way to drop to the ground without lodging into something! Page 838.

SAWING OFF SWARMS—A CORRECTION.

My attack on the habit of sawing off swarms has a bad "out" either in my copying or in the printer's work. Not true that so many as several hundred in each thousand cause damage to the neighbors. What I was trying to say was that several hundred cause damage to the trees; and that several *dozens* cause damage to neighbors' trees. Page 7.

Maple Sugar and the Sugar Bush, by Prof. A. J. Cook; 44 pages; price, postpaid, 30 cents. This is by the same author as "The Bee-Keepers' Guide," and is most valuable to all who are interested in the product of our sugar-maples. No one who makes maple sugar or syrup should be without it. Order from the office of the American Bee Journal.

Why Not send in some new subscriptions for the American Bee Journal? Samples free for the asking.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Bee-House Bees Exercising in Winter.

Is it best to open the doors of the bee-house on fine days for the bees to exercise? It is perfectly dark when the door is closed.
MICHIGAN.

ANSWER.—If the construction is such that the bees will easily find their way back to their hives, they may be allowed to fly; otherwise not.

◆

When to Clip Queens' Wings.

When is the proper time to clip queens' wings? VERMONT.

ANSWER.—Your desire for a speedy answer suggests that you may be thinking of clipping in winter. Don't do it. Neither should you do it on the day bees take their first flight in the spring. But any time after that before swarming-time, on a day when bees are flying and gathering from flowers.

◆

Moving Bees a Short Distance.

I have 6 colonies of bees, and want to move them this winter about 300 yards, over in a young orchard. Can they be moved without the bees leaving the hives next spring when they begin to fly? Will they go back to the old place where they were last year, or will they take to their new places where I intend to put them this winter? I would not want to lose the bees by moving them. OREGON.

ANSWER.—Move them at a time when they have had no flight for a long time and there will be no trouble, especially if the old spot is changed as much as possible in appearance.

◆

A Method of Preventing Increase.

I have kept bees on the farm for 14 years. I aim to keep down swarming as far as possible, by hiving the prime swarms on old stands. I have 50 colonies now, and don't want any more increase. What will probably be the result if I hive prime swarms on the old stand, and break up the old colonies, and about eight days later unite it with the prime swarm? Or can you suggest a better plan?
SUBSCRIBER.

ANSWER.—Your plan may work all right if you don't mind the loss of brood. Here's a plan that would not result in loss of brood, if you don't mind the trouble: When a prime swarm issues kill or remove the queen, returning the swarm, and a week later destroy all queen-cells but one. Better still, put your ear against the hive each evening, beginning a week after swarming, and when you hear piping destroy *all* cells the next morning.

◆

Hives, Sections, Supers, Etc.

I would like to have a catalog of bee-supplies describing the hives, sections and frames that you use, and where they can be had, with prices. Which is the best arrangement for honey with the least trouble and manipulation, to keep bees with outdoor wintering, where the temperature goes as low as 30 degrees below zero? I have been thinking of making box-hives of 2-inch lumber, 2½ feet deep, 12 or 14 inches inside measurement; fit them up with frames, with supers to suit, and interchangeable with 2-pound sections.
WEST VIRGINIA.

ANSWER.—Taking the last part of your letter first, I should advise against you making more than one or two hives, such as you describe, till you're sure you'll like them. I doubt whether you will. Two-inch lumber will be expensive and unwieldy without corresponding advantage. Very likely you think the heavier lumber will be warmer for winter; but you can have the extra warmth more easily with some kind of outside packing, if it's nothing more than cornstalks piled around, and you will find the thinner walls better for summer. If the cold is so continuous that there is seldom any chance for the bees to fly in winter, it would be worth your while to try at least a colony or two in the cellar. You see it isn't so much the severity of the cold as its continuousness that is to be considered. If the temperature goes down to 30° below zero every two weeks, and if the bees have a chance to fly every two or three weeks, they'll winter outdoors all right. If it never goes below zero, but keeps somewhere in that neighborhood without a chance to fly for five months, then they are better in the cellar.

I'm sorry to say that I don't know of a catalog that has everything in it just as I use it, but any catalog will contain what I use with just two changes that you can have made to order. I dislike having anything but regular goods, but when I think any one thing out of the regular order is decidedly better *for me* than regular goods, I feel obliged to make the change. One of the things is a plain cleat on each end of the hive 1½x⅞, and as long as the full width of the hive. It is away ahead of short cleats or hand-holes for handling the hives, and it strengthens the weakest place in the hive—the thin part left by the rabbet. The other is the Miller frame, which you can have made to order. You'll get nearly the same thing if you order the regular staple-spaced frames. I feel very confident you'll like the full cleats, but you may not like the Miller frame as well as I. It makes as little trouble with bee-glue as any self-spacing frame I know of.

As before said, by ordering specially these two changes you can get from any catalog the things I use, which are: The 8-frame dovetailed hive (unless you pay very close attention to your bees the 10-frame may be better for you, especially if you winter them outdoors), the T super, the common 4¼x1⅞ section, with plain wooden separators. Yes, there is one other thing, too, that is different from the catalogs, but it is not so important in my estimation as the other things, and that's the bottom-board. It is just the plainest kind of an affair, a box open at the front end and two inches deep. You will find them in the catalogs as much as ¾-inch deep, but for winter two full inches is none too deep. In summer the extra depth may be filled up with a piece of board, or in any other way.

It just occurs to me that if you get a regular 10-frame hive it will be without a dummy. I don't believe I could stand that; for the dummy is of the greatest importance in getting out the first frame; so in that case I should probably use 9 frames and a dummy thick enough, or, still better, two thin ones.

I thank you for your kind words.

◆

"Shook" Swarms and Out-Apiaries.

1. I want to start an out-apiary of about 12 colonies next spring for the production of comb honey. I would like to practice the shook-swarm method. What would be best to shake the bees on, empty combs, starters, or full sheets of foundation?

2. When would it be advisable to practice the shook-swarm method, when they have the frames mostly full of brood, or would they have to have queen-cells started, as I can not visit the out-apiary but once in a week?

3. Would I have to put a frame of brood in the empty hive with the shook swarm?

4. I practiced the shook-swarm method a little last summer, but some of them would swarm out again the next day. What was the cause of that?

5. Now, if I want to produce extracted honey would it be necessary to have a queen-excluder above the first story, or let the queen have full access to the hive? WISCONSIN.

ANSWERS.—1. Empty combs are probably best, and full sheets of foundation next.

2. Wait till queen-cells are started, at least the earlier ones. As the season advances you can shake without waiting for queen-cells, provided you are sure you want them all shaken.

3. Not sure. Perhaps it would be well to give one frame of brood to be taken away at next visit.

4. I don't know. Possibly it was hot in the empty hive, and they swarmed out just as a natural swarm often does under the same circumstances. A frame of brood may hold them.

5. You can do either, depending upon circumstances. If all stories have combs just alike, use an excluder; if combs in the upper story are widely spaced and well built out, an excluder may not be necessary. It is said the queen will not trouble so much if extracting frames are shallow.

◆

What is Honey?—Honey Inspectors.

Dr. Miller, you, like Solomon of old, are called on to solve all hard and knotty questions. In these days of adulteration and pure-food laws, a farmer with an apiary is likely to be "jerked" for selling his own production. His milk, cider-vinegar, and buckwheat flour must be inspected. And now the big honey-producers are forcing a honey-inspector, and I would like to know what honey is, and all that is honey.

Long ago, before sweets were manufactured, honey was given to man; all the liquid, viscid sweets that the bees gathered and stored in waxen cells and capped over was honey, pure and unadulterated honey, and was good food for man. We know there are as many kinds of honey as there are sources from which it is gathered.

Please explain honey so that we need not fear to feed our bees and get "jerked" for it. ILLINOIS.

ANSWER.—My good friend, if Solomon didn't know any more about things in general than I do about bees, he was something of a slouch in wisdom, after all. Certainly, I don't feel competent to the task of saying in a few words just what honey is. It will hardly do to say it's any liquid substance that bees store in cells, for it ought not to include sugar syrup. No more will it do to say that nothing is honey except that made from nectar gathered from the flowers by the bees, for with that restricted definition I wouldn't dare to guarantee as pure a single pound of any honey I might produce. Some kind of a definition should be framed that would include anything sweet stored by the bees without being fed by man, possibly; and possibly that isn't right. Sealed proposals for a satisfactory definition may be sent postpaid to this office!

Reports and Experiences

Bees Wintering Well,

We have now 10 colonies in 8-frame, dovetailed hives. To-day being a fine day we looked through them and found them all in fine condition, strong in bees, and with the exception of two all had plenty of stores. Until Christmas we had fine weather, but now have had a few cold days but no snow yet and bees can fly almost daily. C. H. KOENTZ.

Cleburne Co., Ala., Jan. 21.

Weight of Sections—Farmer Bee-Keepers.

One Sunday morning I had a caller to whom I gave a section of honey. He ate it all and went to church. A young man asked a grocer if he would give him as much honey for 25 cents as he could eat. The grocer agreed, and this man ate 2 sections, and said he could eat one more, but he didn't want to be "hoggish".

I sold 2 shipping-cases of honey to a large family in our village. One weighed 23 and the other 24 pounds. One of the boys said to me: "My brother—8 years old—can eat 2 sections at a time."

Last fall I sold extracted honey to a country woman. She saw comb honey on the table and said: "We can't afford to buy comb honey, for one section would not be enough. We are 5 at our table."

I write this because in the Colorado convention report appeared something to this effect: that 12 ounces would be enough in a section; people want honey on the table but once. Are the millionaires the greatest honey-consumers?

Years ago I wrote to the American Bee Journal that selling honey by the piece for a

"If goods are wanted Quick, send to Pouder."

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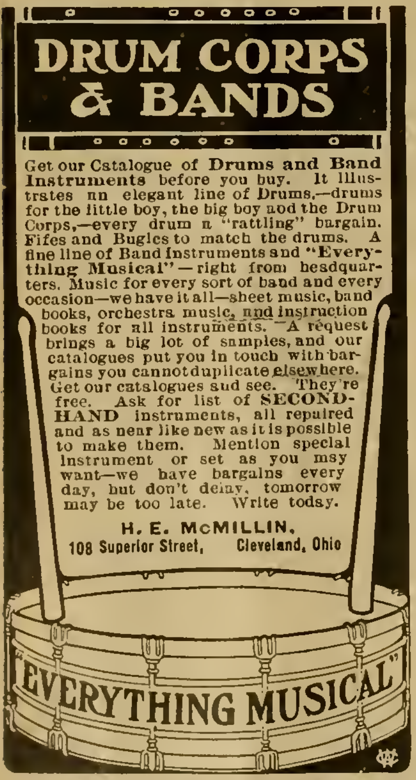

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pound, even if it does not weigh it, is not right, and I will always say so. I think it does injustice to all bee-keepers.

I sold 23 pounds of extracted honey to a family formerly living at Milwaukee. They had to pay 14 cents per pound there. I think some dealers take too large a profit.

I read Mr. Bartz' article on honest weight with great interest, but when I read Mr. Hasty's "Afterthought"—about Mr. Bartz with his 17 ounces—it made me so angry I thought I would never read Hasty's "Afterthought" again.

A question arose in the Wisconsin State Association, "Shall we encourage farmers to keep bees?" It was answered, "No, they spoil the honey market", and every bee-keeper ought to keep less bees so as to increase the price of honey. When one kind of grain or one kind of cattle, etc., becomes too cheap, the farmers sow or raise less of that kind.

I always got 10 cents per pound for my extracted honey, but for the last year-and-a-half I sell it at 8 cents because a farmer sold his extracted for that price. I sold 1,000 pounds or more last year and most of this to farmers, but if all farmers kept bees, should we sell this honey to dealers for 6 cents per pound?

I got about 85 pounds of comb honey per colony, spring count, last season. I have all my bees in 10-frame hives.

Wm. Duescher.

Brown Co., Wis., Jan. 11.

Winter Confinement of Bees.

I have 33 colonies of bees, and have worked to prevent swarming, succeeding pretty well. I work for both comb and extracted honey.

I have wintered bees in the cellar for the past 25 years, and they always come through good and strong. I do not believe taking them out early does them any good, and I

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ON THE EAR
L. L. OLDS SEED CO.
CLINTON, WIS.

WISCONSIN SEED CORN SHIPPED ON EAR

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nursery stock grown in Northern Iowa is **Healthy** and full of fruiting vigor. To introduce our new method of grafting, which insures a hardy root system, we will send free to each property owner reading this advertisement, 6 Long Scion. Foster Mother Root Apple Grafts (ready for planting) of our best hardy sorts. Postage 5c which you may send or not as you choose. A postal will bring them. Write today. Price list, bargain sheet, etc., free. Address

The Gardner Nursery Co.
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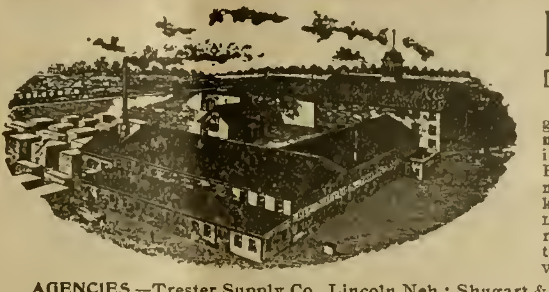

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Bell Branch, Wayne Co., Mich

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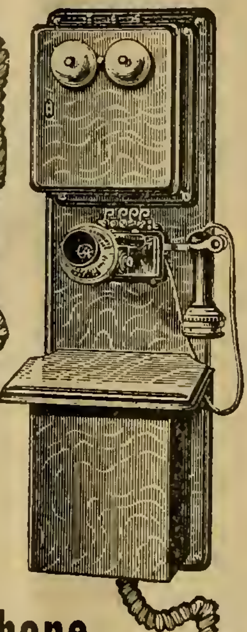
PAYS
Its Own Cost



Don't let cost keep you from the money saving features of a telephone. Cost cuts little figure if returns warrant the outlay. False economy is keeping many farmers on the grindstone. Often one instance alone like a timely sale when prices are highest, or assistance in time of need—when accident, fire, or sickness occurs, is worth ten times the cost of a

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To absolutely please bee-keepers in filling their wants has been our constant aim for eight years, and while we do not boast about ourselves we are sure that we are excelled by nobody. If you are not already a customer don't fail to write to us and tell us your wants.

Bees, Supplies, Honey and Beeswax.
Lewis' Goods at Factory Prices.
SPECIAL DISCOUNTS given on all orders before the rush season.
C. M. SCOTT & CO.
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have left them in sometimes over 5 months. It is not the length of confinement that injures the bees so much as a poor quality of honey for winter stores.

I took the American Bee Journal long before Mr. York became the publisher of it, and I think I must be the oldest bee-keeper in this State. I have kept bees for 36 years, and in that time lost all but one colony. In the course of 10 years I again lost all but one. I built up each time from the single colony. If I live till spring I will be 79 years old.

Linn Co., Iowa, Jan. 9. D. C. WILSON.

Rains in California.

We have just had more rain in the nick of time. If there comes as much in February and more in the last of March there will be a crop, either large or small, according to the amount of rain in March. In this locality about one-half, or more than that, of the colonies, are dead. But there are enough left.

C. W. DAYTON.

Los Angeles, Co., Calif., Jan. 17.

"The Survival of the Fittest."

April 1, 1903, I had on hand 84 colonies, and produced 4000 pounds of comb honey and increased to 148 colonies. I left these unpacked on the summer stands all winter, knowing that they would survive a common winter with very little loss. But, alas! the uncommon winter caught them and they starved and froze to death with from 10 to 30 pounds of honey in their hives.

May 10, 1904, I took inventory of stock and found I had only 7 queens and about 3 quarts of bees left. This now constituted my entire

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And sells them at reasonable prices. New catalog now ready. Address,
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stock of bees and queens, occupying 7 hives. I could not buy any to make up for the loss, but nursed these remaining stalwarts tenderly. They responded to my care most nobly. For, by Sept. 15, 1904, I had extracted 1400 pounds of honey and increased to 20 strong colonies of bees. This is a clear case of the survival of the fittest, in my estimation, and I will be greatly surprised if I have not a sturdy, hardy and profitable lot of bees, being the progeny of the survivors of the severe winter of 1903 and 1904. J. T. HAMMERSMARK.

Tuscola Co., Mich.

Is Pickled Brood Contagious?

All of my bees in an apiary of 51 colonies had pickled brood except one colony of Italians. I fed honey to all the diseased colonies. I let a neighbor have some combs from one of these diseased colonies, and the colony

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600,000 planters scattered the world over are willing to say under oath that Salzer's Earliest Vegetables are from six to twenty days earlier than the earliest of their kind produced from other seedsmen's seeds. Why? Because for more than one-third of a century Salzer's Seeds have been bred up to earliness.

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1 " "	Earliest Beans	10c
1 " "	4th of July Sweet Corn (Six days earlier than Peep O'Day)	10c
1 " "	Six Weeks Verbena	15c
	Total	75c

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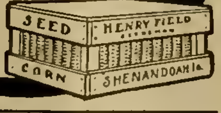

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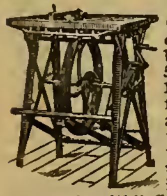

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Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood, frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

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into which he put them became diseased, so we destroyed it. I have killed 3 lots of bees to get rid of pickled brood, but I suspect it will return next season.

I sent samples of the dead larvæ and brood to several experts on bee-diseases, and they all said it was pickled brood; I believe all but one of them think the disease contagious, and I am afraid it is. C. J. BARBER.

Monona Co., Iowa, Jan. 14.

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A WONDER WORKER

A metal incubator that hatches the kind of chickens a hen does—good, strong healthy chicks.

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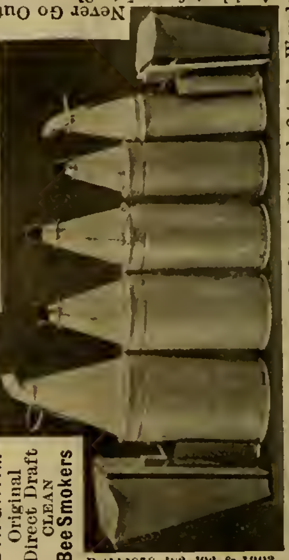

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$1.50.	$1.10.	$1.00.	90c.	65c—per mail.

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T. F. BINGHAM, Farwell, Mich.

OTISVILLE, PA., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. FRED FODNER.

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SEND YOUR NAME

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The fastest and easiest running machine made. It will double your egg yield. Price $5 up.

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LOW PRICES!

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Th **W. T. FALCONER MFG. COMPANY**
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W. M. Gerrish, Epping, N. H., carries a full line of our goods at Catalog prices. Order of him and save the freight.

CONVENTION NOTICES.

Wisconsin.—A bee-keepers' convention will be held at River Falls, Wis., Feb. 8 and 9. An interesting program. Evening session with stereopticon lecture by N. E. France. All bee-keepers are cordially invited to participate.
W. H. PUTNAM.

Michigan.—The Michigan State Bee-Keepers' Association will hold its annual convention Feb. 23d and 24th, at the Eagle Hotel in Grand Rapids. The Eagle Hotel is located at 65 to 71 Market St., cor. of Lewis St., one block south of Monroe St. It will give a rate of $1.50 per day, and furnish a room free for holding the convention. The Michigan State Dairymen's Convention will meet in Grand Rapids at the same time, and advantage may be taken of this fact to secure reduced rates on the railroads. When buying your ticket, ask for a certificate on account of the Dairymen's Convention. The secretary of the Dairymen s Association will sign this certificate which will then enable the holder to buy a return ticket for one-third fare.
W. Z. HUTCHINSON, Pres.

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Bee SUPPLIES
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Honey and ✣ Beeswax ✣

CHICAGO, Jan. 24.—The trade in honey is not large and the offerings on the contrary are quite liberal. This makes an easy market for the buyer. Fancy white comb, 12½@13c; No. 1, 12@12½c; off grades, 10@11c. Extracted, white, 6@7c, according to flavor, quality and package; anything off about one cent lower; amber grades, 5½@6½c. Beeswax, 29@30c.
R. A. BURNETT & CO.

BOSTON, Jan. 9.—The market is without change since last writing. The demand continues light, and supply is more than ample. We quote: Fancy white, 16c; A No. 1, 15c; No.1. 14c, with practically no demand for No. 2. Extracted, from 6@8c, according to quality.
BLAKE, SCOTT & LEE.

KANSAS CITY, Jan. 9.—The demand for comb honey still continues light, as most of the retail dealers were stocked up on $2.25 honey before the holidays, two cars of which were sold here at that time. We look for a better market in the near future, and quote: Fancy comb, 24-section cases, $2.50; No. 1, $2.25. Extracted, white, per pound, 6@6½c; amber, 5½@6c. Beeswax, No. 1, 28@30c. C. C. CLEMONS & CO.

CINCINNATI, O., Dec. 19.—Comb honey is now coming in more freely, and prices if anything have moderated a little. The sales made and prices obtained were for No. 1 fancy water-white comb, 12@13½c; single cases, 14c. Extracted is sold as follows: White clover, in barrels, 6½c; in cans, 7½@8c; amber, in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c.
C. H. W. WEBER

PHILADELPHIA, Jan. 9.—The market is unchanged from our last quotations, and trading light. We quote: Fancy white, 15@16c; No. 1, 13@14c; amber, 11@12c. Extracted, white, 7@8c; amber, 6@7c. Beeswax, 26c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

CINCINNATI, Dec. 30.—Since our last report was published, the price of extracted honey has advanced, no doubt acting in sympathy with the sugar market. We quote amber extracted in barrels at 6@6½c; white clover, in barrels and cans, 6½@8½c. Fancy comb honey, 13@14c. Beeswax, 28c. THE FRED W. MUTH CO.

ALBANY, N.Y., Dec. 26.—Comb honey is moving off very well considering the heavy receipts and cold weather. Prices not as high as early fall, as usual, but very good yet. Fancy white, 14@15c; No. 1, 13c; mixed, 12@13c. Buckwheat, 11@12c; mixed, 10@11c. Extracted, dark, 6@6½c; light, 6½@7c. Beeswax, 28@30c.
H. R. WRIGHT.

SAN FRANCISCO, Jan. 4.—White comb. 1-lb. sections, 11½@12½c; amber, 9@11c. Extracted white, 6@6½ cents; light amber, 4½@5½c; amber, 3¾@4¼c; dark amber, 3@3½c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

Market is quiet and not noteworthy for strength. Although stocks here and throughout the interior are light, there is little inquiry, either for shipment or on local account. There is strong probability, however, that the spring trade will absorb the light stocks remaining.

NEW YORK, Jan. 9.—The market on comb honey is decidedly dull, and while there is no stock of dark and buckwheat to amount to much, all grades of white honey are plentiful, and for the present we cannot encourage shipments. We quote fancy white at 14c; No. 1 at 13c; No. 2 at 1t@12c; buckwheat at 10c. Extracted honey is in fair demand, with abundant supplies and a weakening tendency is noticeable in the market. We quote white at 6@6½c; light amber at 5½@6c; dark, 5@5½c per pound; Southern at 52@55c per gallon. Beeswax, 29c.
HILDRETH & SEGELKEN.

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MASSACHUSETTS AGRICULTURAL COLLEGE.

American Bee Journal

45th Year. CHICAGO, ILL., FEB. 9, 1905. No. 6.

WALTER S. POUDER.

Bee-Keepers' Supplies
Walter S. Pouder
Pure Honey & Beeswax
W. S. POUDER BEE KEEPERS' SUPPLIES

(See page 100.)

C. M. SCOTT.

The A B C of Bee Culture.

Probably no other bee-book in any language has had the immense sale the A B C of Bee Culture has enjoyed. The last edition, bringing its sales up to 100,000, is just from the press; and so rapid are the sales that frequently editions have been exhausted before the new ones could be taken from the press. Of the last 3 or 4 editions, so great has been the demand that anywhere from 1500 to 2000 copies have been ordered before these editions were even off the press. The secret of its large sales may be in part explained by the testimonial below.

It contains over 500 double-column octavo pages, bound in cloth, half morocco, or full leather, to suit the taste of the purchaser. It is not an A B C in the sense that it is written for beginners only, but an exhaustive cyclopedia for the veteran as well, covering every subject relating to the practical management of bees. Its rapid sales have made it necessary to revise it at least once in two years, and sometimes oftener. Neither time nor money is spared to bring it clear up to date in every department of our rapidly advancing pursuit; and so extensive have been the changes that many of our customers get a new copy as fast as each new edition is issued.

The whole work was originally set up in standing type, so that it is very easy to add new matter or change old, blending the whole into one complete treatise. The latest edition, that for 1905, was revised and rewritten after the reviser had traveled some 10,000 miles among bee-keepers in various parts of the United States to study the methods and practices in vogue among the most successful honey-producers. Photos were taken by him and the major part of all the material gathered has been incorporated in this volume. The articles are prepared in such a way that they fit every locality in the United States. The subject of Swarming, for instance, has been modified to fit the peculiar conditions as they exist in Texas, California, and the far West, as well as in the Eastern and Central States of the North. The chapter on Wintering now applies to every locality in the country. Then there is a special article on "Location", and its bearing upon methods and practices in different parts of the United States. Besides the methods of management of the bees themselves, the general subject of preparing the crop for market and selling the same is exhaustively considered in its various phases.

Some of the new subjects that have been incorporated in the new edition are the following: Beginning with Bees; Bees as a Nuisance; Bees, Stingless; Bellflower; Black Brood; Foul Brood; Canada Thistle; Candied Honey; Encalyptus; Gloves for handling Bees; Guajilla; Logwood; Marigold; Orange-blossom Honey; Organizations of Bee-Keepers; Overstocking; Profits in Bees; Queen-Rearing; besides a large number of changes, more or less extensive, important ones, too, in nearly all of the older subjects.

AUTHORSHIP.

The book was originally written by A. I. Root, who, as far back as 1877, saw the need of a work of this kind. There are still quite a number of the articles remaining written by himself; but ill-health, together with interest in other things, made it necessary for him to drop the work he had so grandly started. The general work of revision and keeping the book up to the times has devolved on his son, E. R. Root, who has probably written two-thirds of the work as it now stands.

The Need of Bee-Literature.

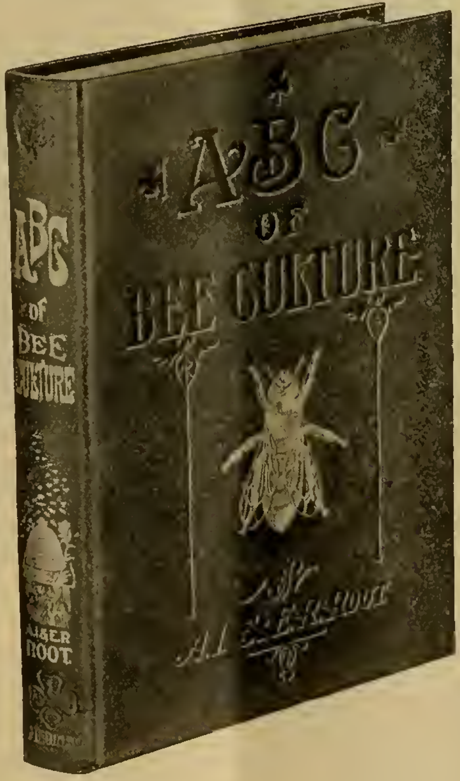
BY G. C. GREINER.

During the 30 years of my bee-keeping I have been a constant reader of at least one bee-periodical; at times two, and even three, have been my regular visitors. I always supposed that by keeping in close touch with the writings of our most prominent experts, any bee-keeper would be enabled to keep up with the times. This is one reason why I never, until recently, owned one of our standard text-books on bee-culture. Accidentally, for that is all the reason I can assign for it, I ordered a short time ago a copy of the "A B C of Bee Culture", and I must confess I was surprised in more than one way.

When I opened the package I was favorably impressed with its outward appearance. Neat and tasty in its general make-up, it would be a desirable addition to the most scrupulously selected library, especially as its contents are in harmony (as I afterwards found) with the outside.

The next pleasing feature was the point of expense. Comparing the size of the book, its workmanship and the amount of reading matter it contains with the price, it is well worth the money the publishers ask for it; it is within the reach of any moderately-stocked-up pocket-book.

But its contents struck my fancy more than anything else. The way it is written—encyclopedia style—makes it an index by itself, so that any subject desired can be readily found. In looking over its pages I find that it is not only an indispensable guide to the beginner, but it is a great help to the veteran of many years' experience. It covers the ground completely, from the first rudimentary principles to the most scientific observations and discoveries of the present day, thus making its perusal interesting as well as instructive to the readers of all classes.



Under the impression of a little overrated self-estimation we are sometimes inclined to think that we know all that a text-book of this kind contains, or at least all that is of any importance to the successful management of our business. This is an illusion. We may by years of experience and study become experts in certain lines, but we are not above improvement and progress. There are many good hints found in the "A B C of Bee Culture" which, if heeded and applied to practical use, would benefit any bee-keeper in a more or less degree.

On the other side, I can not say that I agree in every particular with the writers of the book, and this is only natural consequence. During so many years of toil and labor we form certain habits, become accustomed to certain ways and appliances, that it would be a great hindrance to break off and follow somebody else's instructions. But in my opinion, if the beginner would take the "A B C of Bee Culture" for his guide, and follow its directions to the letter, his way to success would be open.

In closing this little sketch I would not miss mentioning one more fact. The book is profusely illustrated; every department has its share of descriptive illustrations, and the scenic representations at the front and in the back part are exceptionally fine. It is a pleasure to look them over.

La Salle, N. Y.

Price, in cloth, postpaid, $1.20; in half leather, $1.75; in full leather, $2.00. If sent by freight or express, deduct 20 cents from any of the above prices.

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GEORGE W. YORK, Editor. CHICAGO, ILL., FEB. 9, 1905. Vol. XLV.—No. 6.

Editorial Notes and Comments

Young Queens and Afterswarms.

The Canadian Bee Journal takes this Journal to task after this good-natured fashion :

> It is a relief to find that the "Old Reliable" gets "mixed" a little sometimes, too. We were rather amused at a statement which appeared in its pages recently, that when second swarming is contemplated by a colony, "only one" young queen is allowed to emerge and go with the swarm, "the others being guarded in their cells by the workers", to follow in rotation with subsequent swarms. The theory is very interesting and beautiful, very much like the "sting trowel" theory of a few years ago. Our Canadian bees certainly do not exercise so much care and forethought. A number of young queens are often found in second and afterswarms, which would be an evidence that the cells are very poorly guarded, if at all.

Good Canadian, haven't you become a little "mixed" in your reading? The paragraph to which you probably refer is found on page 500 of the last volume, where it is said, "If further swarming is contemplated, only one virgin is allowed to emerge". You have evidently read into it this meaning: "When an afterswarm issues only one virgin is allowed to emerge, and the others are kept in their cells *till after the swarm has issued*". Please read again what is said, and see if you have any warrant for such an interpretation.

You will not find a word said about queens being guarded in their cells after a swarm has issued, nor at any other time except *when further swarming is contemplated;* and you will find more than one queen released when further swarming is contemplated, no matter if one or five swarms have already issued. You say, "A number of young queens are often found in second and afterswarms". To be sure there are, *if* no further swarming is contemplated; but did you ever see a number of young queens in a second swarm, and then a third swarm issue? When you put your ear to a hive the evening before a second swarm issued, did you ever hear more than one queen piping? "But you saw a number of virgins with the swarm the next day"? Ah, yes, but they were not contemplating swarming, then; they were actually swarming.

Whatever Kanuck bees may do, you may rest assured that the rule with Yankee bees is to allow only one queen to be free in a hive so long as further swarming is contemplated.

Foul Brood vs. Bee-Pest.

In the British Bee Journal W. H. Harris urges that the name "bee-pest" should be given to the disease now called "foul brood". W. Woodley wants "bee-brood pest". That might do better in England than here. If foul brood were the only disease to which bees are subject, or even the most severe disease, it might do to give it one of the names mentioned, just as the loose term "the plague" is sometimes used to designate some disease particularly destructive to the human family. But in the course of time England is likely to follow the fashion started in this country, where among bees there are other diseases that might be called pests, at least one of them being rated as more destructive than foul brood.

Mr. Harris thinks "foul brood" misleading because mature bees are liable to be affected by the Bacillus alvei as well as the brood. Yet the disease of the brood is the prominent thing. Moreover, a name once established has a claim to continuance just because of its established usage. If a more appropriate name can be given—well; but it will hardly be "bee-pest" or "foul-brood pest".

Flour as a Substitute for Pollen.

F. W. Penberthy says in the Australian Bee-Bulletin :

> "I found only 10 percent of the brood capped when fed on flour alone for a month ; the larvæ thrive all right until the third or fourth day from the egg, and then a large percentage disappears before being capped."

Has anything of this kind been noted by those who have used flour or any other substitute for pollen? But are there many localities with a whole month of weather fit for feeding, and yet no natural pollen yielding?

Close Spacing for Worker-Combs.

A correspondent of the British Bee Journal asks whether it is an infallible rule that bees will build only worker-comb in frames spaced 1¼ inches from center to center, and the reply is: "Quite infallible if done at the proper time, viz., when hiving the swarm". Can any of our readers report experience in this matter?

Prices of Hives—Are They Too High?

The following clipping from the apicultural department of The Farmer has been sent to this office by Mr. A. T. Dockham, of Todd Co., Minn., with the request for an opinion thereon :

> QUES.—What are bee-keepers to do for hives and bee-supplies if prices remain where they are now? Does the advance in price of lumber warrant the present high prices of hives?
>
> ANS.—Bee-keepers will be compelled to make their own hives. Hives may be made by any one who understands how to handle tools. There is no patent at the present time on any of the standard hives, so

that any one can make them from the material in which his locality abounds. At the present prices of honey bee-hives must be cheap. Expensive hives and complicated fancy implements are a hindrance of apiculture. The system of bee-keeping must be simple, cheap and efficient. The Department of Agriculture at Washington, in its report last January, stated that bee-keeping in the United States was yielding 100 percent profit annually on its investment. This statement, and not the advance in price of lumber, caused supply-dealers to double their prices. A sort of union or trust sprang up. A few, however, have withdrawn and are again quoting supplies nearer what they should be. Look up the advertisements of supply-dealers and find out where you can do best.

Part of the foregoing is truth, and a good deal of it is error, according to views entertained "in this locality". Bee-keepers will not be compelled to make their own hives so long as they can buy them for less than they can make them. The probability is that the case is very exceptional in which a bee-keeper finds he can make a hive cheaper than he can buy one at present prices. If he can, of course that is his privilege. If he can make them as cheap as he can buy them when making only enough for his own use, it follows as the night follows the day that by making them on a larger scale he can make them for still less, in which case there is no law to prevent his making to sell to others.

But is it true that "hives may be made by any one who understands how to handle tools"? The average carpenter or cabinet-maker is generally supposed to understand how to handle tools, but give him an order to make a hive, and see if it will be satisfactory. Exactness of measurement beyond that to which he is accustomed is demanded in the making of a hive, an exactness more easily attained where expensive machinery is carefully adjusted to cut pieces by the thousand, than where each piece is separately measured and cut by hand.

It is true that no patent stands in the way of making a hive that most bee-keepers would prefer.

The statement that a report emanating from the Department of Agriculture should cause manufacturers to double prices is rather amusing as a specimen of logic. Do the supply manufacturers depend upon reports from Washington to estimate the profits of bee-keeping? Could they not give those Washingtonians points in the matter? Suppose, however, that the Washington estimate could be relied on as absolutely correct, what should be its effect? Would it not be a lowering rather than a raising of many previous estimates of profits, and should that not lower rather than raise prices?

In any case, how much do the profits of bee-keeping influence the price of hives? If it should be found that the earnings of a woodchopper were 1500 percent of the amount invested in his ax, would that at once send the price of axes skyward?

But is it true that prices have doubled? Will The Farmer give a single instance of a case in which any manufactory lists a hive at double the price at which it listed it at any previous time?

The closing sentence is good advice, although hardly in keeping with the first statement. Reading advertisements is good business, and the man who watches them closely need have little fear but that competition will keep prices somewhere within reach. If there is "a sort of union or trust", and if it is a fact that "a few have withdrawn" from that union, it seems quite clear that the union has not the power to crush competition, and hence can not be expected to hold prices above a somewhat reasonable figure.

Judging from the way some other editorial opinions that have appeared in this Journal have been construed, we doubt not that some of our readers will conclude that the foregoing opinion is wholly in the interest of the bee-supply manufacturer. But we really believe that any bee-keeper who has the sense and ability to make a hive as good as, and cheaper than, he can buy of the manufacturer, will go ahead and make it, no matter what any one says about it. This is still a free country, we understand, and there is no law against any bee-keeper making all his supplies, if he so desires. No one is *compelled* to patronize the bee-supply dealers. But we notice that about nine-tenths of the bee-keepers of this country seem to be glad to patronize them.

Truly, we don't believe there are any bee-keepers that would want to see all the reliable bee-supply dealers and manufacturers shot just yet. They are a necessity to the best success of bee-keeping in any land. Scarcely any one will disagree with us on that, we think.

Using Strong Language.

Referring to Editor Root's expression, "A stick claws the contents over", Editor Abbott upholds it as giving strength, saying:

> "Claw" means "to scrape, scratch or dig with a claw, or with the hand as a claw", and "stir" would not be a strong enough word in this case.
>
> If two darkies got into a fight and one "clawed" the other's eye out, you would not think of saying that the fellow had his eye "stirred" out. Stir would be tame. You might stir syrup, but you must claw beeswax refuse.

"In this locality" one would not say an eye was stirred out, nor rubbed out, nor coaxed out, nor a whole lot of other things, because those words don't mean the thing that was done; more likely it would be said the eye was punched or gouged out, because those words convey the right idea.

So we are to understand that "claw" means the same thing as "stir", only stronger. You stir mush, so long as you go slowly, and when you go fast enough you claw it. You stir up strife if you get two men to jawing each other; if you get them to blows then you claw up strife. The general principle seems to be that when you want to make your language stronger, just use another word that doesn't mean what you're trying to mean!

Miscellaneous News Items

The Wisconsin Convention held at Madison last week was fairly well attended considering the 20-below weather. We were present and enjoyed both the convention and meeting the good bee-keepers of that cold region. The following were the re-elections of officers: President, N. E. France; vice-president, Jacob Huffman; secretary, Gus Dittmer, of Augusta; and treasurer, Franklin Wilcox.

Two Indianapolis Bee-Supply Dealers.—Last fall we visited some of the bee-supply manufacturers and dealers, among them being Messrs C. M. Scott & Co. and Walter S. Pouder, both of Indianapolis, Ind.

We called on Mr. Scott first, and found him located in a very good store filled with a stock of supplies made by the G. B. Lewis Co. Mr. Scott also deals in honey, and is developing a large trade in it. While we were there he was handling considerable honey, as it was just at the beginning of the honey-dealing season.

After leaving Mr. Scott's establishment we looked up Walter S. Pouder, who handles the A. I. Root Co's brand of supplies. Mr. Pouder is also a honey-dealer, and has lately taken up the manufacture of peanut butter. He has all the necessary machinery for making a very fine article, and will mail a sample of the butter to any one upon receipt of 6 cents in stamps. It is put up and sold in tin cans through the grocers. Mr. Pouder's office and store are models of neatness and order.

Mr. Pouder and Mr. Scott are young men, and both are by honorable dealing and energetic efforts building up a business that will endure, and from which they deserve, and doubtless will receive, a good financial return. We heartily wish each of them the fullest realization of their highest anticipations.

On the front page are shown these two Indianapolis hustlers, with pictures of their store fronts as well.

* * *

The Annual Meeting of the Worcester County Bee-Keepers' Association was held in Worcester, Mass., Jan. 21. The following officers were elected: President, F. H. Drake; vice-president, Burton N. Yates; secretary-treasurer, C. R. Russell, of Worcester.

Arrangements were made for a banquet to be held Feb. 24, to be followed by an address by Mr. Arthur C. Miller, of Rhode Island. A broad invitation was extended to all bee-keepers, and especially to the Massachusetts State Association. Mr. Miller has been heard before, and the mention of his name should be enough to draw a large attendance. We understand that Massachusetts bee-keepers are looking forward to a prosperous year.

Contributed Special Articles

Proper Care of Hives and Combs After a Winter's Loss of Bees.

BY G. C. GREINER.

To select the above heading for the subject of an article at this late hour may seem a little out of date, and I admit it is, but we have never passed a winter yet without some losses, light as they may have been, neither can we tell what this winter may have in store for us, so that the following suggestions may be just in time for next spring.

The unusual heavy loss of bees last winter brought the old saying of "A blessing in disguise" fresh to our minds again. It does not require a great deal of imagination to see the benefit of these occasional clean-outs, especially if it is the "other fellow" who lost all his bees and we escaped unharmed. We all know if bees never died, it would not be many years before the country would be so overstocked with bees and their products that bee-keeping as an occupation to provide a comfortable living would be a thing of the past. But Providence and the expert's experience comes to our rescue. The former to cause an unfavorable season for unprotected or improperly prepared colonies to survive the winter, and the latter to enable the professional bee-keeper, by a better knowledge of the necessary requirements for wintering, to escape these heavy losses. And this is not all, for even if the experienced bee-keeper has met with heavy losses, he sees some points which he can turn to his advantage.

Whatever the number of dead colonies may be when spring opens, we have that many hives and sets of combs left, and if rightly managed they can soon be stocked up again, and the winter's loss thus replaced. It is the care of these depopulated hives and combs concerning which I wish to make a few remarks.

As soon as we find any colony missing, its hive and combs should have a thorough cleaning out, and the sooner this is done the better. The dampness, decaying bees, and other foul stuff, which we generally find in hives of dead colonies, soon spoil a set of combs, or greatly impair their value; they mold, become befouled, and smell badly in a very short time, and when used later on are so offensive to a swarm that their use may be the cause of absconding, for which we imagine we can assign no reason.

The best way, and one which requires least handling, is to have an empty hive to start with. Set this near the hive to be cleaned, either in front or behind, but near enough so that a frame can be taken from one and put into the other without being obliged to take many steps. Then open the hive to be cleaned, take out the first comb, sweep off all adhering bees, scrape all brace and burr combs from the top-bar and hang in the empty hive. A wing will do the former, and a strong-bladed jack-knife ground very blunt but sharp is excellent to do the latter.

After all combs are treated likewise, then the empty hive should be thoroughly scraped all over the inside, and especially both sides (side and bottom) of the rabbet. A hive that has been in use for many years is generally more or less covered with chunks of propolis, and a good scraping makes it as habitable as a new one. I use square pieces of thick glass for this purpose, which I cut myself from broken double-glass window-lights.

The combs should not all be placed in one hive; it is better to leave one out and give the rest that much more space between them. Close-hanging combs are a great inducement for the wax-miller family to set up house-keeping, but they keep very shy of widely-spaced combs. Besides, a little more space gives better circulation of air, and keeps them purer. Then, to insure free circulation, the full entrance of the hive should be left open, provided with a wire-screen to keep out all intruders, and the top of the hive left open as much as possible without allowing the bees to have access to the combs.

When the hives and combs have thus been taken care of they may then be kept until swarming-time, to be used for the increase. But in this case a few points must be taken into consideration:

It requires constant vigilance to keep the combs from the ravages of the worms, for as soon as warmer weather approaches they are sure to make their attacks. The seclusion of the dark hives offers them an excellent opportunity to engage in their destructive work, unless the hives are frequently examined by the apiarist. If the shop or honey-house is provided with sufficient open frame-racks to store all surplus combs, they are more easily kept from destruction when stored in this way.

Another point, which should not be overlooked, is the fact that combs exposed to the atmosphere any great length of time become stale; the wax seems to lose its flexibility, and the bees are more or less inclined to object to their use. It is therefore advisable to manage in some way to have them occupied again by the bees as soon as possible.

A good opportunity to use any surplus combs offers itself when the colonies are in proper shape and the season far enough advanced to begin the spreading of brood. A side comb may then be taken out, the brood spread, and one of these extra combs inserted, which, if circumstances are favorable, will be stocked up with eggs in a very few days.

I have always found it a good plan to give the combs of dead colonies a thorough looking over before using them again, and the chance to do this may be considered one of the little gains brought about by the winter's loss. Every comb, before it is used as above stated, is first shaved down, uncapping fashion, to the thickness of the frame (or less). No matter about the honey—if it contains any all the better; if not, the edges of the cells are shaved off just the same. But we must remember that it requires a very thin, sharp uncapping-knife to trim empty combs. Then the comb is exposed to the bees for cleaning out. For this purpose I always keep a hive or two with two or three extracting supers each, a little distance from the apiary, filled with that many sets of so prepared combs (I use the same frame above and below).

After the combs are all cleaned out I move them to the honey-house and replace them with a new supply. In this way I always have a lot handy to busy myself with on stormy days, or whenever I have any leisure time.

The next operation is to look them over. If they contain any drone-comb it is cut out and patched up with worker-comb, or, if they are not attached to the bottom-bars, a strip is fitted in there to fill the opening. We know from experience that the space between comb and bottom-bar is many times a very annoying feature, and if we can, by a little fixing up, dispose of these loopholes and catch-alls, I think the time of looking them over is well spent. But I will say right here, that, try as we may, some colonies will not accept our engineering. Instead of finishing the work we have laid out for them, they finish it the wrong way by gnawing the little strip all out again. Nature's instinct—to leave a necessary passage below the combs—seems to keep the upper hand of them; and this is not strange, for they are laboring under the impression that the bottom-bar constitutes the bottom of the hive. In this case we have to let them have their own way, and patch up again whenever it is convenient. Niagara Co., N. Y.

Bees, Birds and Fruit in California.

BY C. W. DAYTON.

FIVE years ago last July a man came into my honey-house, and while I was filling his pail with honey, casually remarked with a smile: "Mr. Williams, up there, who owns the big orchard, is badly worked up because of the bees working on his apricots, and is making all kinds of threats".

"Is that so? I did not know that 'cots were ripe yet," I answered.

"Yes, they are ripening pretty fast. I suppose on account of the four or five days of hot weather we have just had. I was up there yesterday and got some."

As he stepped out of the door I remarked, "I guess I also will have to go up and hit Mr. Williams for some apricots some time to-morrow".

About 10 or 11 o'clock I called on my wife for the largest pail in the house, as I was going after some 'cots, and, I assure you, it was not slow in forthcoming.

Near the side of the orchard I inquired of a picker where I could find Mr. Williams, and was directed up a road toward the middle of the orchard, where I found him and some 50 or 75 boxes of fruit from which he was sorting out the occasional mutilated ones which had been mistakenly thrown in.

"Good morning, Mr. Williams. I came up to get a few 'cots. You seem to be getting an abundant crop of fruit this year."

"Good morning, sir; good morning. Yes, we will get a good deal of fruit if we succeed in getting it off the trees before the bees do."

"Indeed", said I, "it does *look* that way."

"May I inquire your name? I do not remember having seen you, although I am acquainted with nearly all the neighbors around here."

"My name is Dayton, but I am quite commonly known as the honey-man, but possibly bee-man would be easiest for you to recollect."

"Dayton—Dayton", he repeated; "I do not remember having heard your name."

"I live a quarter of a mile below the post-office, and own those white hives you may have noticed; and since I have more bees than any one else about here, I suppose most of these in your orchard came from my hives."

"Well—yes; I believe I do remember the place; and—how many apricots did you wish to get, Mr. Dayton?"

"I guess I will take the pail full."

"When he had poured out of one of the boxes of marketable fruit enough to fill the pail about one-third, I said to him, "That will do of that kind, Mr. Williams. If it will be agreeable to you, I would prefer to fill up the pail with those which the birds have pecked".

"Birds!" he exclaimed. "We have not seen any *birds* around, as I know of."

"Well, I always *supposed* the mutilation of fruit in this manner was the work of birds."

"*John*—JOHN!" called he, to the spokesman of a band of five or six Chinamen, "have you seen any birds in the orchard?"

"Nope—na, no any." After a long pause, he added, "Yick, yick. Two four, six placee" (meaning nests). "Ober 'im cook 'ouse. Us eat 'im 'fore'efix' 'im wing out. Muchee gone".

After a good laugh by several bystanders had subsided, I ventured, "If you will listen closely, Mr. Williams, I think you can hear a chatter of birds in that row of eucalyptus along the side of the orchard". After listening a moment, he said, "Yes, I wouldn't wonder if there were a thousand birds up in those trees".

As he turned around to fill my pail from the box of mutilated apricots, which were lately sorted out, I interrupted him with, "Mr. Williams, if it would still be as agreeable to you, I should prefer to go out and pick the mutilated ones from the ground and trees".

"He said, "Yes, take your pail and pick up as many as you want. We do not consider them as worth anything".

As I started out, thinking that he might conclude that I possessed about as much "cheek" as my bees, I returned, "That is, from your standpoint; but from my position they are worth even more than the marketable ones, and I shall be quite as glad to pay for them".

When I returned and had paid for them, he gave vent to his curiosity by saying: "If it is a fair question, I should like to know the reason why you prefer the mutilated apricots?"

"Well, Mr. Williams, there are several reasons instead of one. Had these in my pail not been mutilated you would have picked them for market, partially green, several days ago. And, again, if the bees had not removed the fermenting portion wherever it occurred, they would now be entirely spoiled. Also, they are the largest and sweetest in the orchard. As you well know, the earliest and largest apricots grow low down on the tree. Their blossoms came out earliest, last February, and by the last of March were the size of hickory-nuts, while those which are beginning to ripen out towards the ends of the limbs could scarcely be seen. They did the most of their growing during the moist weather of winter and spring; and they grew to the limit, so when hot summer began there was not much else to do but hoard up sweetness for the time of ripening. Being down in partial shade their skins are tender, while those more exposed are thick-skinned and tough, like soggy potatoes; while those in the pail are so mealy and tender that they can readily be broken into a bowl of milk, together with two slices of bread and one-half pound of granulated honey; just makes a meal."

"Well, I declare", said Mr. Williams, "I don't think I should kick very hard against a dish like that myself. Guess I'll bring out the children to-morrow and have them pick a box of that kind. Those that I have always taken home were out of the market boxes, but our folks did not seem to care much for fruit."

"As to these mutilations which the bees are working at, some were mutilated yesterday morning, but more of them the morning before, and considerable several days ago.

"Now, most persons think that bees choose the sweetest, but in my experience this is a mistake. Sugar is sweeter than honey, and yet they choose the honey. They are attracted to fermented juices in preference to unfermented. In fact, a person can prove this to his satisfaction by simply walking out amongst these trees. We often see a cluster of bees which entirely hides an apricot, and if we attempt to examine it it will be found to be so rotten that it can not be handled, while the freshly mutilated ones on the trees are scarcely noticed by the bees.

"Those which were picked into this morning are still sweet, but those of yesterday, after being exposed to the sun, and then the dew falling on them during the night, are now beginning to ferment, and if you should taste of such a one you would say that it is gone beyond all hope of redemption. But not so with the bees. When a bee alights on a mutilated apricot, or peach, or fig that is still sweet, it does so by mistake, and thrusts its tongue in only long enough to taste, then runs all over the apricot to see if there is not another opening; and, if not, it goes to another apricot, and so on until it finds one of the right flavor, or, sourness.

"An apricot, or peach, or fig does not ferment all through at once, but only at the exposed and ragged edges of the mutilation, and if there is not more mutilated fruit than the bees can manage, they will remove the fermented portion just about as fast as it forms, so that a mutilated apricot will be eatable so long as a remnant remains. To maintain that bees bite into fresh fruit while there is decaying fruit lying about, is as unreasonable as to say that a rooster continued to jump up against a cornstalk with the hope of once in awhile knocking a kernel out of the ear, when the ground around about was strewn with better corn already shelled.

"But if you should walk along beneath those trees over there, Mr. Williams, those birds would become as hushed as a flock of quails; because they may mistrust you had come to demand the return of your fruit. Those birds are like domestic fowls—they want their breakfast as soon as it is light enough to see, and this is some two or three hours earlier than any one comes into the orchard to work; and, besides, it is difficult to see the birds working on fruit, because they are enough like quails to put out sentinels. These are the red-breasted fellows which perch on the topmost twigs and appear to be singing, but, in reality, are only chirping to their brothers and sisters which are creeping from branch to branch among the leaves in the densest part of the trees, selecting the tenderest and sweetest apricots. If you get within ten rods they chirp out that a suspicious biped is stalking down through the orchard at an unusual time of day, and the birds begin to sneak out singly from the far side of the trees and go to the far side of the orchard or to some secluded place; but the sentinels continue to chirp on even until you begin to disappear under the outer branches of the very tree they are perched upon."

"Well", says Mr. Williams, "I will bring out a cot and blankets and stop here nights and see what is going on in the orchard in the early morning."

I have not seen Mr. W. since, but as he has allowed some bee-keeper to keep an apiary in his orchard throughout the past and one other fruit season, it can be pretty certainly guessed what his conclusions were.

Los Angeles Co., Calif.

Convention Proceedings

Report of the Nebraska State Convention.

The annual meeting of the Nebraska State Bee-Keepers' Association was held at the State Farm Experiment Station building Monday afternoon, Jan. 16, 1905. In the absence of the president, E. Whitcomb, who has not missed a session in ten years, the meeting was called to order by the vice-president, L. H. Trester. C. E. Lewellyn was chosen chairman of the meeting.

Much interest was shown by all bee-keepers present, and many questions were fully discussed in regard to the care and handling of bees. The treatment and possible cure of foul brood was discussed at some length. Though this disease is not found in many apiaries in Nebraska, it is the pest of the bee-keeping industry, and all wide-awake bee-keepers are ever on the alert to avoid its spreading.

The climatic influence on bees brought forth many points of interest. A bee-keeper from California mentioned the fact that alfalfa honey in California was almost tasteless, while Nebraska alfalfa honey was more delicious in flavor. This is probably due to the kind of nectar secreted in the flowers in different climates.

The one question of great importance to the bee-keeper was how to produce the most honey with the fewest number of bees. This question seemed best settled by resorting to artificial swarming, that is, to make it possible for the bees to swarm when the bee-keeper desired, and avoid allowing them to swarm when the bees took a notion. Too much swarming will dwindle a colony, and when the honey-flow is on the colony may be too weak to gather enough honey to last them through the winter. During the past season the air seemed to be filled with runaway swarms flying in many directions. They would lodge under the siding of residences, hang in trees, on bushes, go into old boxes, and often in hives that were set to catch these stray swarms. This not only shows the prolific inclination of the busy bee, but the neglect of the bee-keeper in allowing his new swarms to escape and be gathered up by others, or to be wasted by taking quarters where they will be of no profit to any one.

The industry of bee-keeping is only in its infancy in Nebraska. The past year has been the most prosperous in the history of bee-keeping in the State. The display made at the State Fair last year was a sample of the products, and many were surprised at the fine display of both quantity and quality. The growth of this industry is noticeable, and, notwithstanding the abundant crop, honey is still held at a fair price; the demand for it is growing each year, and the bee-keeper is inspired to put forth another effort and produce a supply equal to the demand.

The meeting, on the whole, was full of interest, and many new members were taken into the Association. Bee-keepers throughout the State would profit by making a great effort to attend these meetings, as subjects are discussed which will help them as no other means can.

At the close of the discussion the following officers were elected for the coming year: President, C. E. Lewellyn; vice-president, L. O. Westcott; secretary and treasurer, Miss Lillian E. Trester, of Lincoln.

Next year the Association expects to have a honey exhibit, and all bee-keepers of the State are expected to bring something of interest to the meeting at that time.

Through the columns of the American Bee Journal we wish to tell the bee-keepers that they are missing something when they fail to meet the brother bee-keepers and enter into the discussions brought out in these meetings. If you are not already a member of the Nebraska Association, write to the secretary at once, and enroll yourself either as a yearly or life member, and then plan to be present at the annual meeting next year, both to receive and give help.

LILLIAN E. TRESTER, *Sec.*

Our ✣ Sister Bee-Keepers

Conducted by EMMA M. WILSON, Marengo, Ill.

Feeding Bees in an Observatory Hive.

On page 40 is an inquiry by "New Jersey," in regard to feeding bees in an observation hive, and I am moved to give my method, which has proved very successful.

Get or make a small box 4 or 5 inches square, and about 2 inches deep, with movable cover. Cut a round hole in the cover of a size to take in a pint Mason jar inverted, on the principle of the Boardman feeder. Bore a ⅝-inch hole in the end of the hive, which is in the room, half an inch from the bottom. Bore the same size hole in one side of the box, then match the holes together and screw the box to the hive. Of course one must either have a special cap for the can, or else break out the porcelain lining and punch holes in an ordinary cover, or you can put a small saucer in the box and feed in that. ELLA C. SHEPARD.

Middlesex Co., Mass.

Busy, but Storing Nothing—Other Difficulties.

I have had a few colonies of bees for five years now, and have tried to do my best for them, from no experience and with only the guidance of books. May I tell you just what I did this year, and will you criticise?

First, I have only alfalfa, fruit-blossoms and honey-locust for them. There may be a few wild flowers, but nothing in any quantity. We have a good deal of hard, south wind in the spring and summer, and the mercury goes to 110 degrees sometimes, but for three months usually above 95 degrees at midday. When I started with the bees I was told that the wind would be a serious difficulty, so I have put the hives on the north side of a high mulberry hedge, so that they are well shaded and protected from wind. Another hedge, 50 or 60 feet north, protects them from north winds in winter, and I leave them there all winter. So far as I can judge they have always wintered very well.

For the season of 1904, this is their history: I reduced to two colonies in the fall of 1903. April 1 I took out the winter packing. They seemed vigorous and busy. I had in May two swarms from each colony, all nicely settled in the hives with full frames of comb, mostly empty. Alfalfa blooms, and the first crop is ready to cut usually by May 15 or 20. All went well, alfalfa blooming freely, never more so, I think. The bees seemed busy, and I looked for much honey. They continued all summer to seem busy. The largest, strongest colony, to my surprise, swarmed in July. I looked through the hives about once in two weeks, and all was well, as far as I could tell—plenty of brood and bees, but almost no honey. The three latest swarms stored none at all; the two early in June should have done so, I thought. I took off in all about 100 pounds of honey, almost none of it first-class. I have no method of manipulation except to try to keep them supplied with queens, and to feed in the fall if there seems to be the least chance of shortage; in fact, I have always fed some. The two queens for the original colonies were bought in July, 1903, and the young queens are their offspring. I bought leather-colored Italians, and they looked like fine ones. I had to feed strongly last fall; the hives were very light. What do you think could have been the cause? One year I had 200 pounds of comb honey from one colony—a swarm of May 15, a double swarm, I think. That is, two that looked like separate swarms alighted on the same tree. I gave them two hives, but they all went into one.

I shall be very much obliged for any criticism and suggestion. I take the American Bee Journal, and have the "A B C of Bee-Culture" and the Langstroth book; the little "Amateur Bee-Keeper", and the Agricultural Department's book by Mr. Benton. I am very much interested, especially as I am the pioneer in this neighborhood. But I don't feel justified in enlarging until I can manage better. Of the five years when I have had from 2 to 12 hives, I have never had an altogether successful year. The year I spoke of as having so much from one colony, I had only 250 pounds from the 4 other colonies.

I notice in some of the pictures that the hives are set two together, and then a space, usually very small. What is the reason for that arrangement? How often should one look through the hives in the working season, after the swarming-time? I have a good deal of annoyance with propolis, where the bees work slowly. Is that usually the case?

My hives are the dovetailed 8-frame, 6 inches off the ground. I have never known of any suggestion of moths or foul brood here.

With queens of the age of mine, would you destroy them this spring, or use them the coming season—the two originals of July, 1903, I mean?

Clark Co., Kan. (Miss) Helen Perry.

Sometimes bees seem busy—indeed, are busy—when they are not getting a bit of surplus. There are times when, for some hidden reason, little or no nectar is to be had, although flowers are plentiful. There may be enough nectar to keep the bees a-field, but it is all used up for brood-rearing.

There was nothing very unusual about that strong colony swarming in July. They were strong in brood and bees, and with just a little more nectar coming in than was needed for daily use, bees are as likely to swarm as when it comes in a flood. That very strong colony could be storing at least a little when the weaker ones were living from hand to mouth.

It looks a little discouraging that you have not had what you consider an altogether successful year, but there's that crop of 200 pounds from one colony which many would envy you. The other 4 colonies giving a total of 250 pounds could not be called so very unsuccessful. From the whole 5 colonies you had an average of 90 pounds. Do you call that very bad?

As you gain experience you will no doubt be able to avoid weak colonies, and to bring up all so as to come nearer an average of what your exceptionally strong colonies do now.

Setting hives in pairs, as you speak of, saves room. Suppose you place your hives singly, 6 feet apart from center to center; you can just as well put a pair where each single hive stands, for the bees will not make the mistake of going into the wrong hive of a pair. Then it's sometimes convenient, when opening a hive, to have the other hive to set things on.

After the swarming is over there is usually no need to go through a colony at all except to see that it has a laying queen.

Yes, bees bring in more propolis when honey comes in slowly, especially late in the season.

If those two 1903 queens are doing good work, better let them alone.

Honey as a Health-Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food", written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey". It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey the more honey they will buy.

Prices, prepaid—Sample copy for a two-cent stamp; 50 copies for 70 cts.; 100 for $1.25: 250 for $2.25; 500 for $4.00; or 1000 for $7.50. Your business card printed *free* at the bottom of the front page on all orders for 100 or more copies. Send all orders to the office of the American Bee Journal.

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Some Facts About Honey and Bees.—This is the subject of an article written by Mr. J. E. Johnson, and published on pages 581-82 of the American Bee Journal for Aug. 25, 1904. We have republished it in 4-page leaflet form for general distribution, and furnish it, postpaid, at 35 cents per 100 copies. Send all orders to the office of the American Bee Journal.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

BABY NUCLEI AND QUEEN-BREEDERS.

My idea, Mr. Pharr, was that queens reared in the baby nucleus were never better, but usually a trifle poorer, than those reared in old established ways. Grant that much, and that I was thinking not at all of queen-breeders, but only of queen-users, and it is easy to see how I came to say that our craft would be better off with the invention suppressed. I can see that it may increase somewhat the profits of the Southern queen-breeder—and it looks like I was wrong in ruling him outside the phrase "our craft". Page 843.

HONEY CANDY FOR WINTER FOOD.

"Important if true" are the facts about bee-candy which E. L. Bussey gives on page 843. Half sugar and half *comb honey* (so as to get the wax) makes a pliable and tip-top winter candy; while half sugar and half extracted makes a hard article.

SAINFOIN'S UPS AND DOWNS.

So sainfoin has stood three Wisconsin winters, and bees visit it eagerly. Two improbables. Good. Sainfoin seems to be a football; a few weeks ago it was badly down, and now it is up. Page 846.

DEFINITION OF HONEY.

Natural and proper to agitate for a precise definition of honey, but the difficulties in the way are great. The most rigid definition practicable will let in some honeys that are entirely unfit to eat. The moment we exclude anything the bees gather from natural sources we are confronted with large quantities of a fairly edible substance that is partly honey and partly not honey. Also a large fraction of the crop in most apiaries—the bee-man himself doesn't know whether it's honey or not. As to mean flavored stuff of bark-louse origin, or from half-decayed fruits, 'twere much better to call it honey and shut it out of market than to call it something else and permit it to kill off customers under its own proper name. Page 851.

GOVERNMENT ADVERTISING OF HONEY.

A person must be hard to please if not pleased with the offer of government aid in advertising honey coming through Prof. Benton—50,000 copies of a good-sized pamphlet for circulation entirely free. Page 853.

HONEY LEAFLETS FOR GENERAL REPRINTING.

Mr. Woods made a good shot when he warned us about a danger in getting up a leaflet or statement to be copied free by local editors. Unless very wisely drawn and quite brief it will be cut down before printing. And unless very close supervision is exercised the editor's utter lack of bee-lore will play havoc right there. Mere pleasantries, and pungencies and wonders will be retained; and the most important things of all will turn up missing. And when the editor feels obliged to summarize a long paragraph with a sentence, queer mistakes will be printed as official truth right from fountain-head. Page 854.

ILLINOIS AND WISCONSIN SISTERS.

So Illinois and Wisconsin more than balance 39 other States—when it comes to furnishing lady members of the Association. Page 856.

HIVE-ENTRANCES IN OUTDOOR WINTERING.

Allen Latham inclines to be the apostle of wide entrances for outdoor wintering—and predicts more losses for bees not so arranged. Last winter my conceit was that the colonies with extra-wide entrances suffered quite a bit worse than the others. This time I contracted all the very wide ones; and some I let be that had grown very small by sinking into rotten bottoms. Maybe now I shall dance for it. Page 855.

BUTTER AND HONEY AS A BREAD-DIP.

The Arab (or anybody else for that matter) might do worse than have a warm mixture of butter and honey to dip his bread in. Page 869.

DEEP FRAMES FOR EXTRACTING.

The editorial hits it squarely where it pokes hard at deep frames used for extracting. Oft green honey at the bottom of the frame when it is rather necessary to extract, and the honey above is ripe and all right. I use such frames, and like them, on the whole—and mean to keep on using them—but a sorely weak spot was found. Page 869.

SMOKE BEES LIKE A SENSIBLE PERSON.

As you indicate, Mr. Dadant, it serves him right; and his sin finds him out—the fellow who is proud of his ability to open hives without smoke. The bees do not indeed sting *him* very much; but they are needlessly made angry, and sting the neighbors all around. And the net result is joint efforts to get the bees moved, when it never would have been thought of had he used smoke like a sensible man. Page 807.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Prevention of Swarming.

1. Having a few colonies, and very little time to watch for swarms, if I prepare an empty hive with shade, bee-entrance guard, frames and starters, and place it directly in front of and facing the same way as the parent colony, but so close up to the old hive that the bees will have to pass back and forth through the new hive to the field, is it likely, when swarming, they would take up their abode in the new hive? or would not such a plan be practical?

2. Not desiring any increase, if in five days after a swarm issues I destroy all queen-cells in the parent colony, and place it with a queen-excluding honey-board on the super of a new hive, will the brood, when hatched, unite with the bees in the lower chamber? or would not such a plan be practical? Ohio.

Answers.—1. The plan has been tried by a good many, but not with satisfaction.

2. It will not do well for comb honey, but may be all right for extracted. If you destroy the cells five days after swarming it may be well to repeat the process after another five days.

Transferring Bees—White Clover—Overground Cellar.

1. We have some bees which we got out of a bee-tree. They have no honey, and only 3 little pieces of honey-comb. We have fed them thus far. They are in a block sawed from the tree. When can I transfer them, and how? The hollow in the block is about the size of a gallon measure, and we can't leave them in it if it gets down to zero for two or three weeks.

2. How shall I feed them? Could I put them in a room?

3. How many colonies of bees can be kept in one yard?

4. I want to sow some white clover seed in the spring. Will it bloom the first year?

5. Can I sow it on timothy stubble, or will the ground have to be broken?

6. What other kinds of plants are good for bees? I have never kept bees, but am just buying some.

7. Next year I want to make a cellar on top the ground. I am going to make it with a double wall and fill in between the walls with dry sawdust, and make it so it won't freeze inside. Could I keep bees in it the same as they do in an underground cellar through the winter? Illinois.

Answers.—1. I don't transfer before fruit-bloom. Your bee-book will give you instruction for transferring, although with only 3 small pieces of comb there will be little more to do than to dump the bees down in front of an empty hive and let them run in.

2. You can put comb honey or candy in close up to the bees. It will hardly do to keep the bees in a room, but it will be a fine thing to keep them in a dark cellar.

3. That depends upon the pasturage within a mile or two. In most places not more than 75 or 100.

4. Not enough to count on.

5. It will grow almost anywhere, and with any kind of preparation.

6. There are hundreds of honey-plants, but none, perhaps, that will pay to sow for honey alone. It might be worth your while to try sweet clover, alsike clover, and buckwheat.

7. It will be all right if you keep it dark and steadily at about 45 degrees, but it will be easier to do that if it is at least partly underground.

Winter Transferring—Size of Hive to Make, Etc.

I started with a lot of box-hive colonies last summer, and have about 40 in the cellar. I am a rural route mail carrier, and work my spare time towards getting a supply of good standard-size hives for bees in the spring. Several of the old hives cost me only 50 cents each, some $3.00, but some are nearly destitute of food.

1. Would it do to take some of the box-hive colonies that are in danger of starving into a warm room this winter, and transfer them to good frame hives, using only the good combs, and contract to the size bees will occupy, placing candy between the frames or on top? Or would it cause the bees to be over-excited, filling themselves, and when again confined in the cellar without a cleansing flight, to become filthy and sick?

2. Will it injure colonies to have the top of their box loose (not sealed); as, for instance, the dovetailed hive and a flat, loose cover (in cellar ranging from 42 to 48 degrees)?

3. Is it any advantage to have hives crowded full of bees in the fall before putting into the cellar?

4. I got several swarms from friends who wanted to kill them and take the honey, and after driving them in my forcing-box I united them in 8-frame hives rich in stores. What would you do to two of these when the bees hang outside of the hive in the cellar, and continually make a humming noise as if uncomfortable? The hive, bees, and bottom-board weighed 69 pounds when put in Dec. 9. I have raised the cover one inch for more ventilation; it helped only little.

5. Do you recommend, when one starts with all new hives, to make the brood-body 2 inches deeper (Dadant fashion), with telescopic covers? or what hive do you recommend?

6. Will it pay me, when transferring a number in the spring, to use full sheets of foundation instead of the old combs from box-hives?

7. What are tulip-trees, also called poplar or whitewood? Have we any such tulip-trees here in the Mississippi region? (Can it be cottonwood-trees?)

8. If I make my own hive-bodies, what kind of frame would you advise me to buy for practical bee-keeping? Grundy Co., Iowa.

Answers.—1. Don't transfer in winter. Those box-hives, most likely, have no bottom; if they have bottoms, pry them off. Turn the hives upside down, put candy between or on the combs, and leave them upside down as long as in the cellar. When I had box-hives I wintered them upside down in the cellar.

2. Not a bit; unless the entrance is very large it will be all the better to be a little open at the top.

3. I suppose it might be possible to have colonies too strong, but there isn't much danger in that direction. It's an advantage to have them very strong.

4. If raising the cover an inch quieted the bees a little, raising it more ought to help more. Try 2 inches, or even taking the cover off entirely. Possibly the cellar may be too close.

5. I don't like to advise. It won't cost you a great deal to try a few of the regular size of Langstroth frames and compare them with the deeper, and see which is best for *you*.

6. Better transfer all the straight worker-combs, unless you allow the bees to swarm first (which may be better), in which case you'll hive the swarm on full sheets of foundation, and then break up the old colony 21 days later. Then it will be a question whether to melt all old combs or to save the best.

7. No, they're not cottonwood; they have a beautiful blossom that looks like a tulip.

8. Most likely the regular size Langstroth, 17⅝x9⅛; unless, indeed, you should prefer the deeper frame, as mentioned in Answer 5.

Don't you worry about my understanding your questions. If being a Scandinavian makes you write so neatly and express yourself so clearly, I wish a lot of bee-keepers would turn Scandinavian.

Membership in Bee-Keepers' Organizations.

If I unite with a bee-keepers' association in an adjoining State, said association uniting with the National in a body, will I go into the National as a member on the same basis as the other members? Bee-Keeper.

Answer.—I don't know that there is any formulated law upon the subject, but the law of custom in such cases rules. No geographical lines govern strictly the membership of bee-keepers' societies. A bee-keeper may find it convenient to join a State association in an adjoining State, and if received as a member he is entitled to the same privileges as other members. If for any reason a bee-keeper in Canada should elect to unite with a society in the Southern States which unites as a body with the National, it is his privilege so to do, and it is the privilege of such society to accept him, and he will be accepted as a member of the National the same as others.

Handling Foul-Broody Colonies—The Rietsche Press.

1. I am a beginner in the bee-business, and my bees had foul brood last fall. They are the common black bees, and into all colonies that did not show foul brood I put Italian queens last fall. I have some of the old foul-broody colonies left yet, and my thought was to put them on starters and then on full sheets of foundation in the spring, very early; but I see that you do not think I can do so before the honey-flow.

I have a few colonies of bees that I bought, and would like to move them home early in the spring. What can I do to get rid of the foul brood and save the bees in the spring? I want to know if I can not shake them on starters before the honey-flow and feed them? Can I not rid them of the foul brood in that way, and give the bees to other colonies of the Italian race?

The colonies I wish to move home are free from foul brood.

2. I want to put in some more Italian queens in the spring. Would you advise putting them in before the honey-flow? The earlier I can do it the better, on account of the foul brood, I suppose. Those I wish to move home are common bees.

3. If I am careful in handling the foul brood, can I not save the brood-frames that contain such disease, by scraping or boiling them?

4. Do you know anything about the Rietsche press for making foundation? New York.

Answers.—1. It is possible that you might, early in the season, feed the bees regularly in such a way as to make it take the place of a honey-flow, but it is hardly advisable. Bring those bees home—they'll be just as safe as the healthy colonies already there—then treat the diseased ones in the honey-flow. Do what you can to avoid having any of the diseased colonies robbed, for that's the special danger. If a foul-broody colony becomes queenless or very weak, there is danger that the healthy colonies will rob it and carry home the disease. So break up any that are in any danger of being robbed, and be very, very careful not to expose any of the combs with diseased honey. You speak as if you thought of giving the bees from the diseased colonies to the healthy colonies. Don't do that; they'll take the disease with them.

2. The earlier the queens are put in, the earlier, of course, will be the change to Italians; but it costs more for queens early, and you mustn't count on changing the blood to drive out the disease.

3. Yes.

4. Thousands of Rietsche presses are in use in Europe, one reason being that so much of the foundation on the market there is adulterated. In this country there is no trouble about buying pure foundation, and although a few years ago a number had machines to make foundation, nearly all buy now. It is possible, however, that by using leisure time for it, some would do well to use the Rietsche press.

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Reports and Experiences

Long Confinement in Winter Quarters.

My 85 colonies of bees were in winter quarters 155 days, or 5 months and 5 days without a single flight, the winter of 1903-04, and all came through the winter except one colony. I never lose any sleep over the bees wintered out-of-doors, and seldom have any loss, while many around here have lost 75 percent and some all of their bees. After long experience I have about decided that if bees are properly put away for winter they can just curl up and wait till spring comes. At least some of my best colonies were hard to waken in the spring. Chas. Mitchell.

Ontario, Canada, Jan. 17.

Yields for 1903 and 1904.

In 1903 I had 3 colonies in the spring, increased to 5, and got 700 pounds of comb honey, most of it in brood-frames with 1-inch starters.

In 1904 I had 4 colonies in the spring and got 300 pounds of honey, 250 pounds of it in sections. To-day I have the small number of 4 colonies and wish I had 25. I will buy more if I can get them at a price that is right. I am to work on a farm for monthly wages, and keep the bees where I worked last year, and as soon as wages and bees will permit I shall work a farm for myself. That's the best kind of freedom.

I can not do without the American Bee Journal as a matter of business and pleasure. Last year was the first season I was ever a subscriber to it, but for 5 years before that I was in a family that took it. So I have had more than one year of pleasant reading on the subject of bees. Elmer E. Porter.

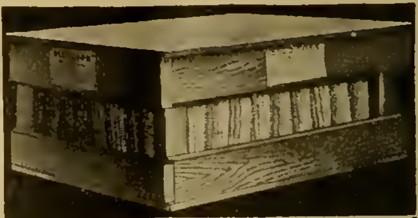
Winnebago Co., Ill., Jan. 16.

Ventilating Bee-Cellars—City Bee-Keeping.

I noticed in one number of the American Bee Journal a lengthy article regarding the ventilation of bees in winter quarters. From my personal experience I can offer some hints that might be interesting to some readers.

It is perfectly natural for bees to have good fresh air. If not furnished to them, you are denying Nature, and to deny Nature to so great extent is disastrous.

In a basement or cellar having 50 colonies or more, bring a stove pipe (or smaller, say from 3 to 6 inches as the case requires)



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THE EAR SEED CORN MAN

through the cellar window, continue it down the side of the wall and across the cellar bottom, leaving at every 4 or 5 feet a 2-inch hole on top in the pipe to deliver fresh air. Then, continue a like pipe across the ceiling with small openings like the long pipe, and if convenient, lead it to some chimney or flue, otherwise run it up on the outside of the building a height of 6 feet or more.

By doing this you will procure perfect circulation of fresh air. By holding a lighted match at any one of the intake holes in the pipe, you will nearly extinguish the light by the draft.

It is a small expense to fit up this way. One-half the cost of one colony of bees will pay for the pipe.

Of course you will get some condensation in the intake pipe, and water will form, but by slanting the pipe and leaving a drain it will amount to practically nothing.

The pipe can be preserved by getting two quarts of asphaltum, worth say $1.00 per gallon. Make a trough long enough for a length of pipe to lay in, and submerge each pipe. When this is dry rust will not penetrate. It is useless to bring in a pipe or leave a window open, thinking you can get an equal distribu-

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tion of fresh air. You have in some manner to deliver the fresh air to the bottom, and have a good ventilation at the top, in order to procure perfect results.

The way I came to get interested in bees was this: Last summer, while in Minneapolis, a swarm of bees came in from the country, I suppose, and settled in a tree in front of the house. I hived them. Shortly I became very much interested in their workings. Later I bought 3 more colonies and a quantity of extra hives, supers, and all necessary tools for handling them. For wintering I built a closet under the basement stairs, and ventilated it as described. I find I have perfect fresh air, and enough for a person to live in. I have been in the electric business for nearly 20 years, and find the study of bees is almost equal to the modern use of electricity.

I am away from my home all day, and am not able to watch the bees very closely during the swarming season. I am a little afraid the city authorities will, in the summer-time, object to my keeping live stock in the city. To prevent any annoyance to my neighbor and not knowing where they may alight when they swarm, will some one explain in detail the best course for me to pursue?

I do not expect to make any money out of my limited chance for keeping bees, neither do I ever expect to see my money already invested in bees, but as the encyclopedia says, some people have been studying bees for 2000 years, and are still studying them. It must be a grand study. G. M. JONES.

Hennepin Co., Minn.

The Hoffman vs. Closed-End Frames

MR. EDITOR:—On page 22 Mr. Allen Latham says it is beyond his understanding how any one can use a Hoffman frame. He says:

"Why any one will use a Hoffman frame is beyond my understanding, for it has practically all the disadvantages of the closed-end frame with only one and a half of the advantages . . . . Why in the name of common sense not carry the full width of the end-bar clear to the bottom and get all the advantages?"

Lest some beginner may be misled into thinking that the change from the closed-end frame to the Hoffman was not a step in advance, it may be well to answer Mr. Latham's question:

The advantage of the closed-end frame over the loose-hanging frame is that it is warmer, and that the spacing is automatic. The disadvantage is that it kills bees. In the estimation of a large number, the advantage of the warmth is overbalanced by the disadvantage of the killing, leaving the advantage of automatic spacing still to its credit. In the Hoffman frame the end-frame is closed less than half its extent, making less than half

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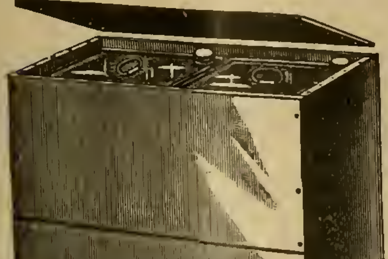

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the warmth and at the same time less than half the killing of bees. To the minds of those who think the prevention of killing of more consequence than the saving of warmth, that gives the Hoffman the preference over the closed-end frame, while it has still *all* the advantage of self-spacing. Mr. Latham seems to have these things in mind, at least part of the time, but singularly enough closes his eyes to the killing disadvantage in the closing question. To be entirely fair, his question should have been, "Why not . . . . get all the advantages, *and also all the disadvantages?*" The answer is that the full advantage of self-spacing is left in the Hoffman, and the other advantage of the closed end is overbalanced by its disadvantage.

Speaking of the closed-end frame, Mr. Latham says:

"And right here let me say that it will not cause the death of any more bees than will the wide bottom-bars which some of our sages are advocating."

Which one of our sages is advocating a close-fitting bottom-bar? Or does he mean that they kill bees in some other way? Will Mr. Latham kindly explain? LEARNER.

Season's Results—Wintering Bees.

I saved only 27 colonies out of 105 packed in dovetailed chaff hives last winter. I bought 26 more colonies last spring, paying $145 for them. Most of them were in pretty good hives.

So I began in the spring with 53 colonies, many of them being weak. I increased to 112 colonies, and 8 nuclei, and harvested 7400 pounds of honey, nearly 4000 pounds being in 1-pound sections, and the balance extracted. I have sold about $550 worth, and have about 200 pounds on hand.

I have 103 colonies in chaff hives on the summer stands, and 8 colonies and 8 nuclei in

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Sent on receipt of price per mail.

T. F. BINGHAM, Farwell, Mich.

Otisville, Pa., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. Fred Fodner.

Engravings For Sale

We are accumulating quite a stock of engravings that have been used in the American Bee Journal. No doubt many of them could be used again by bee-keepers in their local newspapers, on their stationery, or in other ways. Also, if we can sell some of them it would help us to pay for others that we are constantly having made and using in our columns. If there is any of our engravings that any one would like to have, just let us know and we will quote a very low price, postpaid. Address,

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a new cellar 22x30 feet, under my dwelling-house.

This is my first experience in cellar-wintering. I had the heaviest loss last winter in my 25 years' experience.

Bees are wintering well so far. They had a flight Dec. 27, and also New Year's day.

B. W. Peck.

Ashtabula Co., Ohio, Jan. 10.

Severe Winter—That Bee-Calendar

My bees are getting along first-rate in the cellar, with the thermometer at 35 to 40 degrees above freezing point. They seem quiet, and have lots of honey and also air enough, as I raised the entrance one inch, and the hives are nearly two inches lower at the entrance than at the back end. The blocks I raise the hives with will nearly make the hives level again, and the bottom-board will have nearly two inches fall from the rear to the entrance, which gives the dying bees a good chance to roll out.

This is a severe, cold winter so far, with nearly two feet of snow in the timber, and from 8 to 10 feet on the prairie in drifts. The thermometer was from 20 to 30 degrees below zero. The timber is frozen so hard that it is impossible to get an ax that will stand it.

I think all bees on the summer stands in this locality will die for want of honey. Even if they have lots of stores in the hive when it is so cold they can not crawl from one frame to another to get it. Where combs are long enough and filled with honey there is no danger of the bees starving to death.

Tell that inventor of the bee-calendar to hurry up a little. I want one.

B. F. Schmidt.

Clayton Co., Iowa, Jan. 26.

Fastening Foundation in Sections.

I wish to ask the comb-honey producers if any one of them has had trouble in fastening foundation to the sections. I had a good deal of trouble the last two seasons. The wood is very hard, and polished so highly that I find it impossible to make all of them hold. After the foundation is on two or three days I have to go over the yard and replace quite a large number. I use a Parker and a Clark fastener, and have put some on with melted wax. The melted wax holds the best, but is too slow.

The wood that the sections are made of is very hard, and when finished is as smooth as glass. I asked the manufacturer to leave the inside without sandpapering, but he told me that his machinery was made for polishing both sides, and could not be changed for one lot.

Now, if other bee-keepers have had the same trouble, why not join in asking to have them polished only on the outside? I would like to hear from others on the subject.

P. D. Jones.

Livingston Co., N. Y., Jan. 16.

Small Honey Crop—Encouraging Outlook.

The honey crop the past season was the smallest in many years, especially when the matter of the enormous nectar contents of the blossoms is taken into consideration. The cause of the small yield was the great loss of colonies a year ago, or rather last spring.

Owing to the long-continued cold winter which prevented the bees from having a flight, and many of them from reaching the honey, (even though there was an abundance in the hive), some of the colonies starved to death, but the most of them died from disease. Colonies that apparently came through last winter in good condition, failed to build up to strong colonies before fall.

I lost all of my bees, and it served me right, for I failed to pack them—other work which I thought more important, preventing. Of course I was waiting for that "good day" which never came. Had I packed them, even though they could not have taken a flight afterwards until spring, I think I would have saved some of them, for up to this time in an experience of 20 years I never lost one colony that I had properly cared for. But I did not

CONVENTION NOTICE.

Michigan.—The Michigan State Bee-Keepers' Association will hold its annual convention Feb. 23d and 24th, at the Eagle Hotel in Grand Rapids. The Eagle Hotel is located at 65 to 71 Market St., cor. of Lewis St., one block south of Monroe St. It will give a rate of $1.50 per day, and furnish a room free for holding the convention. The Michigan State Dairymen's Convention will meet in Grand Rapids at the same time, and advantage may be taken of this fact to secure reduced rates on the railroads. When buying your ticket, ask for a certificate on account of the Dairymen's Convention. The secretary of the Dairymen s Association will sign this certificate which will then enable the holder to buy a return ticket for one-third fare.

W. Z. Hutchinson, Pres.

Honey-Jars & Honey-Vinegar

We can ship at once on receipt of order, 1-lb. and ¾-lb. Tip-Top Honey-Jars, (octagon shape) at these prices, f.o.b. Chicago:

1-lbs. per 12-doz. crate, $5.00; 3 crates, $13.50.
¾-lbs. per 14-doz. crate, $5.25; 3 crates, 14.00.

YORK'S HONEY-VINEGAR

This is a new thing, made by The York Honey Co., and should be used by all who also buy and use honey Furnish it to your home trade. Sample, postpaid, 10 cents, to pay postage and package. A 10-gal. keg for $3.00, f.o.b. Chicago.

Cash with order in all cases. Address,

The York Honey Co.
Henry M. Arnd, Mgr.
101 E. Kinzie Street, - CHICAGO, ILL.

NO DIRT LEFT

In clothes washed with the "BUSY BEE WASHER" 100 pieces in one hour and no hard work done. That's the record. Agents Wanted. Exclusive sale. Write for terms.

BUSY BEE WASHER CO. Box E. ERIE, PA.

Bee-Keepers' Supplies.

Send for Catalog.

Leahy Mfg. Co., East St. Louis, Ills.

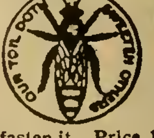
2A16t Please mention the Bee Journal.

Mount Union College

Open to both sexes from the beginning. Founded in 1846. Highest grade scholarship. First-class reputation. 25 instructors. Alumni and students occupying highest positions in Church and State. Expenses lower than other colleges of equal grade. Any young person with tact and energy can have an education. We invite correspondence. Send for catalog.

MOUNT UNION COLLEGE,
Alliance, Ohio.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.


OUR TOIL DOTH SWEETEN OTHERS

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

Please mention Bee Journal when writing advertisers.

PERFECT GOODS!
LOW PRICES!

A Customer Once, a Customer Always.
We manufacture
BEE-SUPPLIES
OF ALL KINDS.
(Been at it over 20 years.)
It is always BEST to buy of the makers.
New Illustrated Catalog Free

For nearly 15 years we have published
The American Bee-Keeper
(Monthly, 50c a year.)

The best magazine for beginners, edited by one of the most experienced bee-keepers in America. Sample copy free. Address,

The W. T. Falconer Mfg. Company
JAMESTOWN, N. Y.

W. M. Gerrish, Epping, N.H., carries a full line of our goods at Catalog prices. Order of him and save the freight.

Headquarters for Bee-Supplies
ROOT'S GOODS
At Root's Factory Prices
COMPLETE STOCK FOR 1905 NOW ON HAND.
FREIGHT RATES FROM CINCINNATI ARE THE LOWEST,
ESPECIALLY FOR THE SOUTH,
AS ALL FREIGHT
NOW GOES THROUGH CINCINNATI.
Prompt Service is what I practice.
Satisfaction guaranteed.
You will save money buying from me. Catalog mailed Free.
Send for same.
Discounts allowed on early orders. Take advantage by ordering now.
Book orders for GOLDEN ITALIANS, RED CLOVERS and CARNIOLAN QUEENS.
☞ For prices refer to my Catalog.
C. H. W. WEBER CINCINNATI ...OHIO...
Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

Please mention Bee Journal when writing

want to disturb them until a warm day, and so I was in the "blasted hopes" column.

Well, not to be outdone, I bought one colony from a neighbor, and it superseded its queen just when it ought to have been rearing bees—and I let it—so of course I got no white honey from it. But I took enough bees to form a nucleus, which I supplied with a golden Italian queen, and the result was two good colonies.

I also sent for a 2-frame nucleus with what was to be a red clover queen, which I got home on May 6, and which stored 60 sections of honey, 40 of them white honey, and besides the lower story was filled with honey.

As I did not care for colonies, I did not try to increase. It cost me $7.00 to commence as told above, and I got, all told, 125 pounds of extracted and comb honey, and have 3 extra-strong colonies, which had a good flight on New Year's day, so I look for them to come through all right.

I think the reason so many of the colonies lived through and failed to build up was that the queens were diseased. I know of quite a number of bee-keepers who took the best care of their bees who lost all. Had the winter been a mild one, their success would have been "luck". The colonies which did build up stored a large supply of extra-fine white honey, but not much fall honey.

The outlook for the coming season is extra good for those who have bees. The big yield the past summer will cause an increase of bee-keepers. GEORGE SPITLER.

Crawford Co., Pa., Jan. 16.

HONEY AND BEESWAX
When consigning, buying or selling, consult
R. A. BURNETT & CO.,
166 SOUTH WATER ST. CHICAGO, ILL.

The Emerson Binder

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.
GEORGE W. YORK & CO.,
334 Dearborn Street, CHICAGO, ILL.

Honey and Beeswax

CHICAGO, Jan. 24.—The trade in honey is not large and the offerings on the contrary are quite liberal. This makes an easy market for the buyer. Fancy white comb, 12½@13c; No. 1, 12@12½c; off grades, 10@11c. Extracted, white, 6@7c, according to flavor, quality and package; anything off about one cent lower; amber grades, 5½@6½c. Beeswax, 29@30c.
R. A. BURNETT & CO.

BOSTON, Jan. 9.—The market is without change since last writing. The demand continues light, and supply is more than ample. We quote: Fancy white, 16c; A No. 1, 15c; No. 1, 14c, with practically no demand for No. 2. Extracted, from 6@8c, according to quality.
BLAKE, SCOTT & LEE.

KANSAS CITY, Jan. 9.—The demand for comb honey still continues light, as most of the retail dealers were stocked up on $2.25 honey before the holidays, two cars of which were sold here at that time. We look for a better market in the near future, and quote: Fancy comb, 24-section cases, $2.50; No. 1, $2.25. Extracted, white, per pound, 6@6½c; amber, 5½@6c. Beeswax, No. 1, 28@30c. C. C. CLEMONS & CO.

CINCINNATI, O., Dec. 19.—Comb honey is now coming in more freely, and prices if anything have moderated a little. The sales made and prices obtained were for No. 1 fancy water-white comb, 12@13½c; single cases, 14c. Extracted is sold as follows: White clover, in barrels, 6½c; in cans, 7½@8c; amber, in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c.
C. H. W. WEBER

PHILADELPHIA, Jan. 9.—The market is unchanged from our last quotations, and trading light. We quote: Fancy white, 15@16c; No. 1, 13@14c; amber, 11@12c. Extracted, white, 7@8c; amber, 6@7c. Beeswax, 26c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

CINCINNATI, Dec. 30.—Since our last report was published, the price of extracted honey has advanced, no doubt acting in sympathy with the sugar market. We quote amber extracted in barrels at 6@6½c; white clover, in barrels and cans, 6½@8½c. Fancy comb honey, 13@14c. Beeswax, 28c. THE FRED W. MUTH CO.

ALBANY, N.Y., Dec. 26.—Comb honey is moving off very well considering the heavy receipts and cold weather. Prices not as high as early fall, as usual, but very good yet. Fancy white, 14@15c; No. 1, 13c; mixed, 12@13c. Buckwheat, 11@12c; mixed, 10@11c. Extracted, dark, 6@6½c; light, 6½@7c. Beeswax, 28@30c.
H. R. WEIGHT.

SAN FRANCISCO, Jan. 25.—White comb. 1-lb. sections, 11½@12½c; amber, 9@11c. Extracted white, 6@6½ cents; light amber, 4½@5½c; amber, 3¾@4¼c; dark amber, 3@3½c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

Market is quiet and for other than choice water-white is lacking in firmness. High-grade honey is in light supply, but there is no scarcity of amber stock. Three lots of Hawaiian Island honey, aggregating 523 cases, arrived the current week.

NEW YORK, Jan. 9.—The market on comb honey is decidedly dull, and while there is no stock of dark and buckwheat to amount to much, all grades of white honey are plentiful, and for the present we cannot encourage shipments. We quote fancy white at 14c; No. 1 at 13c; No. 2 at 11@12c; buckwheat at 10c. Extracted honey is in fair demand, with abundant supplies and a weakening tendency is noticeable in the market. We quote white at 6@6½c; light amber at 5½@6c; dark, 5@5½c per pound; Southern at 52@55c per gallon. Beeswax, 29c.
HILDRETH & SEGELKEN.

Wisconsin Basswood Sections
And Prompt Shipments
Is what we are making for our customers.
— DOVETAILED HIVES AND SHIPPING-CASES —
We carry a full line of SUPPLIES. Ask for Catalog.
THE MARSHFIELD MANUFACTURING CO., Marshfield, Wis.

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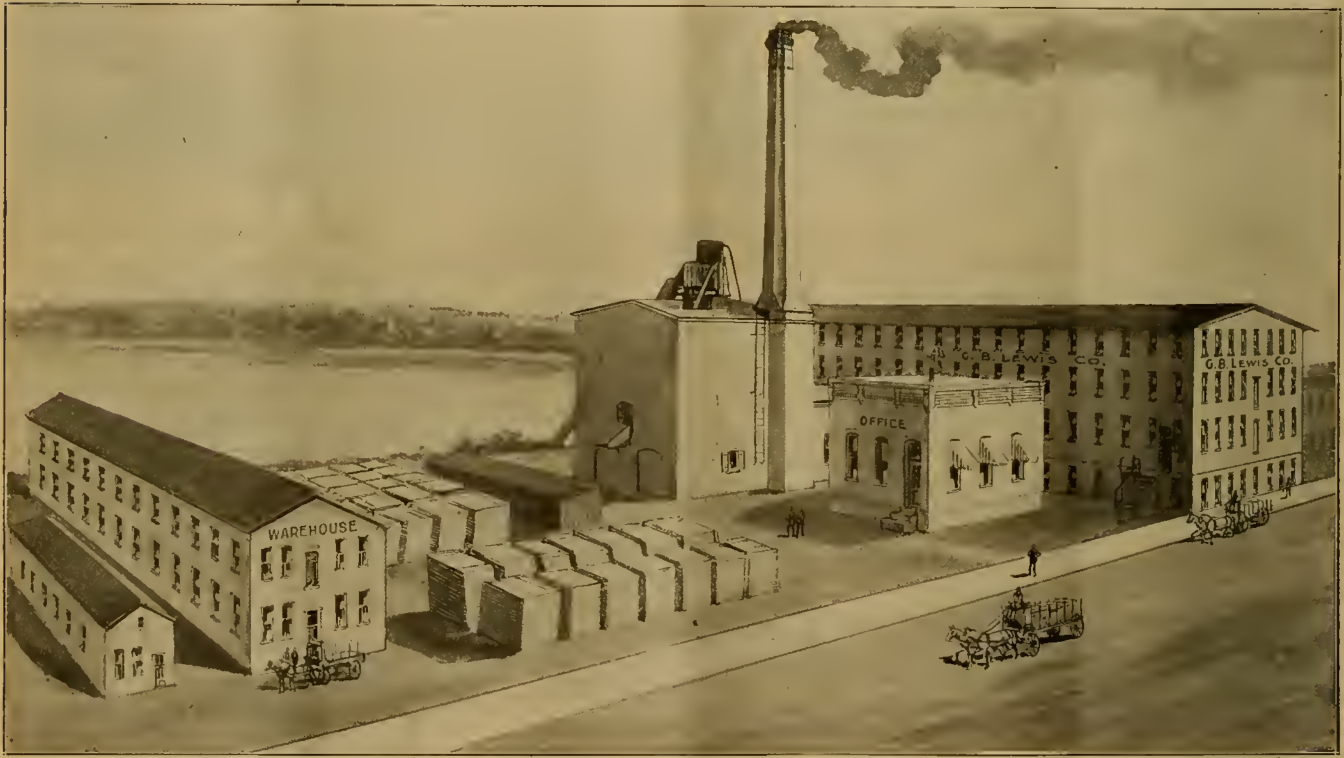
OVER 20 AGENCIES IN UNITED STATES.

SEND FOR CATALOG AND ORDER OF YOUR NEAREST DEALER.

NEW AGENCIES ESTABLISHED IN 1904 AT HAVANA, CUBA, LEMARS, IOWA, AND SAN ANTONIO, TEXAS.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OFFICE
G. B. LEWIS CO.
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Annual Output, Twenty Million Sections, One-Hundred Thousand Hives.

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BEE-KEEPERS' SUPPLIES.

(ESTABLISHED 30 YEARS.)

NOTICE.

Lewis' goods are the BEST that your money will buy. It is economy in the end to use them. They cost you no more than any other standard make. If you have any difficulty in making up your order, determining correct prices, send us a list of the articles wanted and we will make you an estimate showing the exact cost. We have increased our output by installing new machinery, our storage capacity with new warehouses, and are therefore in position to give the best service in the world.

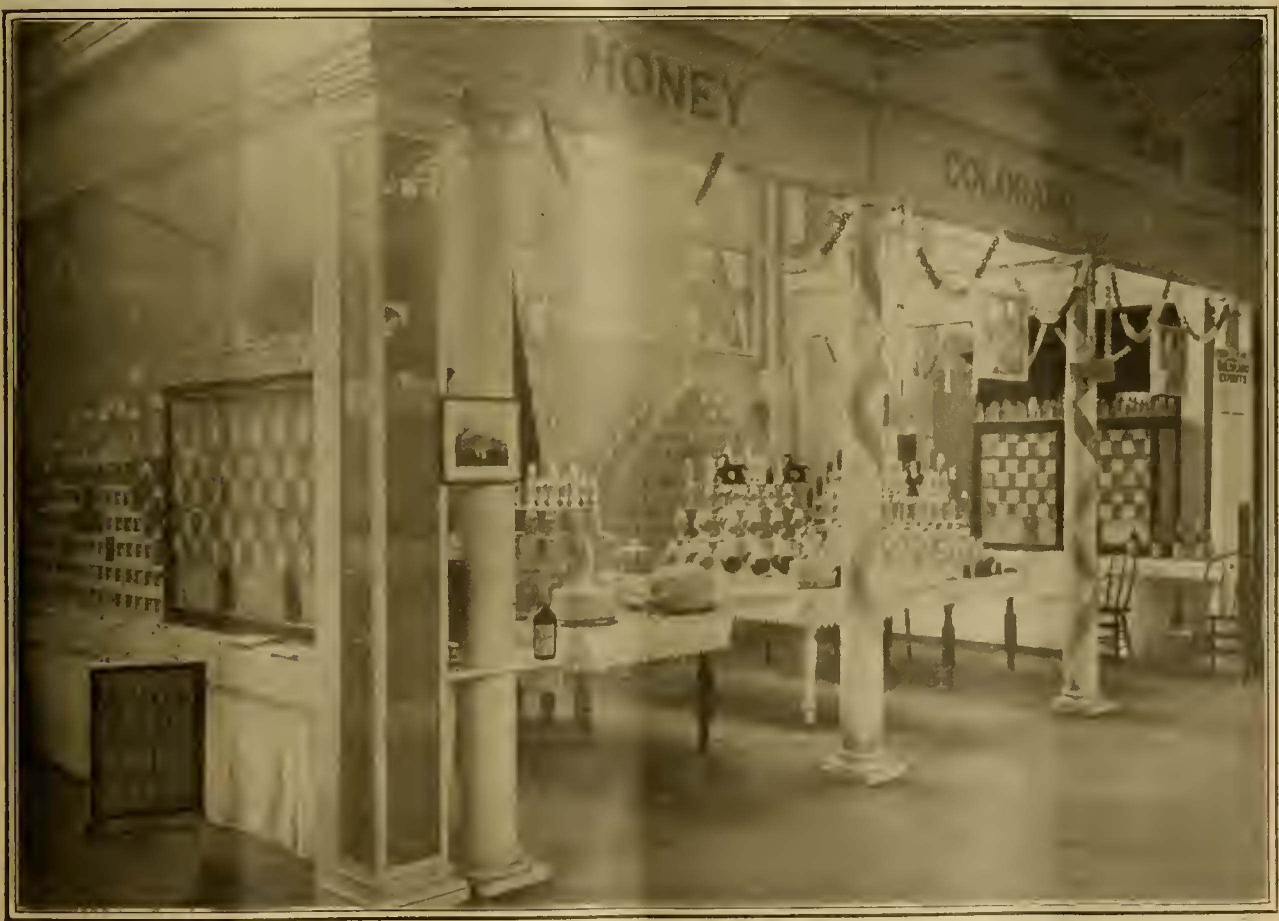
Prompt Shipments ❋ Finest Goods ❋ Consistent Prices

American Bee Journal

45th Year. CHICAGO, ILL., FEB. 16, 1905. No. 7.

MASSACHUSETTS AGRICULTURAL COLLEGE

The Colorado Apiarian Exhibit at the St. Louis World's Fair.



The Colorado Apiarian Exhibit at the St. Louis World's Fair last year was without doubt the most attractive of its kind there. It was in the excellent hands of Hon. G. W. Swink, of Otero Co., Colo., and we are much pleased to present a good picture of this fine exhibit, as shown above.

The display consisted of comb honey in one-pound sections, and extracted honey in bottles from 1/8 pound to 10 pounds each.

There was also a large pyramid of beeswax 2 feet in diameter at the base, 4 inches at the top, and 8 feet high, which weighed 700 pounds. There were very fine specimens of solid beeswax in the forms of horses, roosters, lions, fish, World's Fair buildings, besides bricks of beeswax and many other novelties in wax.

Among other things in comb honey was some fine brood-frames solidly filled with the whitest of alfalfa honey, besides 5 large stars of comb honey, and 5 beautiful samples of different designs built in glass, weighing from 20 to 60 pounds each. These were indeed most ingenious, and attracted considerable attention.

This beautiful apiarian display from Colorado won the Grand Prize on honey and beeswax, also 4 gold medals, 7 silver medals, and 5 bronze medals.

Mr. Swink certainly deserves great credit for the interest he took in preparing and installing this large and attractive exhibit. No doubt it will result in calling the attention of the world to what Colorado can do in apiarian products.

Correspondence Course in Bee Culture.

Last fall we announced this course and made a special offer to students for early enrollment. We have secured quite a number of students, but nearly every one of these wants to continue his own bee-keeping so that we find ourselves without a sufficient number to recommend to parties wanting help in their yards.

We have inquiries now for help from a number of States—California, Colorado, Florida, Idaho, Illinois, Pennsylvania, Michigan, and other States. See what one of our students says:

THE A. I. ROOT CO., Medina, Ohio. LA COSTA, TEXAS, Jan. 28, 1905.

Dear Sirs:—I am very grateful for the 1905 edition of the "A B C of Bee Culture". I am highly pleased with your instructions in your Correspondence Course. It brings out points the amateur could never find by reading bee-books as it gives the essential parts in rotation so to explain them understandingly. It is like having a teacher or trying to study off-hand. Saving so much time and getting the foundation started right is half the battle. I hope to be an expert bee-keeper some day. Should I fail I certainly could not blame you. Everything bearing your name is first-class. May you ever prosper and live long to instruct us. With best wishes, Yours truly, W. R. HESSKEW.

Send for our prospectus, or, better still, send us your order with $10.00, for which we will send you:

Complete Course of 17 Lessons.
Gleanings in Bee Culture 1 Year.
1 A B C of Bee Culture.

We give in addition personal answers to as many questions as the student desires to ask, either on bee culture, locations, help, honey markets, or, in fact, any subject relating to bee-keeping. We know where many good locations are yet untouched; where the good honey markets are; who is needing help, and hundreds of other things that the bee-keeper wants to know. We can't tell you these things unless you ask. If you have hesitated to ask us, thinking we could not well afford to give time to answer your questions, enroll in our Correspondence Course. Never mind if you have been a bee-keeper for 20 years. If you do not need the lessons, the information we can give you by mail on a variety of topics will more than pay you. Let us show you one case:

A party became interested in bee-culture a few years ago and set about to build up a large apiary. He succeeded remarkably well, but paid little or no attention to the honey markets, his time being taken up with other matters. The third season he produced a very large crop of honey (150,000 pounds) and being unacquainted with the markets, he sent it for sale to a large city, to a house no more familiar with the honey markets than he. It appears that they sold it at any price they could get, for he told us later that the information we gave him of another market would have saved him over a thousand dollars on the one sale. (He hadn't asked us for it, but learning of the situation we wrote him, but too late; the sale had been made.) Perhaps the American Bee Journal readers think they would not be benefited. We assure you there are dozens of ways in which you can be helped.

Here is what one of our customers thinks of our "A B C of Bee Culture", which is included with the course:

* * *

"After looking through the 1905 'A B C of Bee Culture', just received to-day, I told Mrs. C. I would not take $25.00 for it if I could not get another copy.—P. F. CONKLIN, Elmira, N. Y."

The New Edition (1905) "A B C of Bee Culture" is $1.20, postpaid, if ordered alone.

* * *

And another customer speaks thus of Gleanings in Bee Culture:

DANVILLE, N. J., Dec. 12, 1904.

Dear Sir:—You ask if I have found "Gleanings" a good investment, and I can truly say the investment has not only been good, but very good. Although I do not keep bees for profit at this writing, but hope to at some future time, will say that I am trying to learn all I can about the subject, and "Gleanings" adds more ideas to my limited store of knowledge than any other publication I receive. All the departments treated in this semi-monthly paper are very interesting to me, and I get anxious to see its pages when the date arrives for its appearance.

Yours truly, RALPH P. FISHER.

Don't you think $10.00 is a small price for what we are offering you?

Gleanings (semi-monthly, 52 pages) is $1.00 per year if ordered alone.

THE A. I. ROOT COMPANY,
MEDINA, OHIO.

Establisht in 1861
AMERICAN
BEE JOURNAL
The Oldest Bee-Paper in America
Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor. CHICAGO, ILL., FEB. 16, 1905. Vol. XLV.—No. 7.

Editorial Notes and Comments

A Reminder—Order Bee-Supplies Early.

When we were in the bee-supply business we had two kinds of summer sympathy. One was for the bee-keeper who suffered for the lack of bee-supplies when they were so sadly needed in order to take care of the swarms and the harvest of honey. The other kind of sympathy was for the overworked bee-supply dealer who was almost killing himself in trying to fill orders promptly, and yet at times could not get the goods from the manufacturers fast enough in car-load lots to fill his accumulating orders.

But much of this suffering could be avoided if many more bee-keepers would send in their orders for supplies about two months before they are really needed in the apiary. This should give both dealer and manufacturer ample time to fill such orders, no matter how many of them there might be.

"But", the bee-keeper says, "I don't know just what will be needed two months later." Of course, you don't know exactly, but you can estimate near enough so as to have on hand practically all that will be necessary when the honey season comes. Fortunately, bee-supplies are not perishable like apples and pumpkins, so if an extra supply is on hand they will keep until another season. It sometimes costs the bee-keeper more to be without supplies when they are needed than it does to have a little extra money invested in a surplus stock of supplies.

Closer Touch of National Officers and Members.

Just when and where a certain subject can be most profitably discussed, and just what subjects can most profitably occupy the time of a convention or the space in a bee-paper—these are questions not easily settled in all cases by hasty thought. Evidently something of this was in the mind of one of the officers of the National Bee-Keepers' Association when writing as follows:

"MR. EDITOR:—It has occurred to me that there ought to be closer touch between the members of the National and its officers than at present exists. It is not pleasant to have an occasional hint thrown out that there is some kind of a 'big four' trying to run the Association without regard to the best interests of the members. Such a thing can not be too severely condemned, and if it exists those who know thereof should not stop at hints, but speak out very plainly, giving names and specifications. The officers of the National are not—at least should not be—autocrats; they are servants of the Association, chosen to be its representatives and do its work. So far as I have had an opportunity to judge from being one of them, I believe that at least most of them have no other desire than to have done just what is best for the general interests of the membership, and if there has been any clique that has had a controlling power in influencing action, I have not known of it.

"But however united the Board of Directors may be in desiring to do just what is best for all, they are in one respect badly handicapped. They have never an opportunity for a full meeting in person, and living long distances apart the discussion of any matter by mail must necessarily be tedious, and to some extent unsatisfactory. The point, however, that I have more particularly in mind just now, is that in their deliberations they ought to have the fullest opportunity for full and free consultation with the membership at large.

"Two ways occur in which this may be done: At the annual convention, and in the columns of the bee-papers. If the latter will permit it, there are distinct advantages in that way. Conference in the convention can occur only once a year; in the columns of the bee-papers from 12 to 52 times. A matter needing immediate early attention may have to wait nearly a year for the convention, and only a week or a month for the paper. Then, the paper reaches a larger number of members than is to be found present at the annual meeting. It costs much less—provided space in the papers is not paid for—no small item. The question is, Will space be accorded?

"Without particularizing others, one subject upon which light is needed—although it may not be referred to the Board, it is one of general interest—is that of incorporation. Will it be good or bad to have the National incorporated?"

There is little doubt that any of the bee-papers will cheerfully give space for the discussion of matters that may come within the province of the National. Indeed, that's what the papers are for, to discuss matters of general interest to bee-keepers. Every bee-keeper should feel at liberty to take the initiative, and to suggest anything that he thinks ought to be acted on by the management of the National. At the same time it should not be forgotten that space is not unlimited, and it must always be left to each bee-paper to decide for itself what is and what is not worthy of publication.

Sawdust for Smoker-Fuel.

This is the way it is used by S. E. Miller, editorial writer in the Progressive Bee-Keeper:

"Grab a handful of green grass and stuff it down on the grate to keep the sawdust from sifting through, fill the fire-cup to within an inch of the top with sawdust, then drop about a teaspoonful of kerosene on top of the sawdust and light it with a match. Let it burn this way and do not close the top for several minutes, or until it has a good start. Then place another handful of grass on top of the sawdust to act as a spark arrester, and close the smoker and it is ready for business. The grass in the bottom keeps the sawdust from sifting down through the grate, and that on top keeps the sparks from flying out. The grass on top will not burn for quite awhile, and when it does, and the smoker begins to throw sparks, put on a fresh supply of grass. As it burns from the top downward instead of the reverse, it will burn a long time before being exhausted."

Incorporation and the National Association.

Entire unanimity of sentiment regarding the advisability of incorporation for the National does not seem to prevail. One member expresses himself on this wise:

"I understand that it will cost only $10 to incorporate. When an incorporated concern was misrepresented in the Ladies' Home Journal there was a prompt, distinct, and unqualified retraction and apology. When bee-keepers were misrepresented in the same Journal, no surprising degree of agility was displayed in making a retraction, and when it did come it could by no means be said that it was so unqualified as to leave nothing more to be desired. If I understand the thing correctly, the difference was due alone to incorporation in the one case and the lack of it in the other. If the National had been incorporated, would we not have gotten back the full worth of our $10 in the different treatment we would have received?"

On the other side of the question, "To incorporate or not to incorporate", another member writes thus:

"The only reason for incorporating the National Association is that we might be able to make trouble. Other bodies incorporate to avoid the individual responsibility of the members, but the only reason that I have heard, up to the present time, for our incorporating is that we might be able to sue somebody. Now, it is my candid opinion that the National Association can find better use for its money than to spend it in lawsuits. The more you have to do with lawsuits the more you will wish you had not had anything to do with law. Here is the point: If we should sue any paper for damages, we would have to prove the damages first. The question would then arise, "Who has been damaged?" And we would have to prove that the National Association, as such, had been damaged. We could not appear in court representing the entire bee-keeping industry, whether we are incorporated or not incorporated. All we could do would be to represent the members of the incorporation, and we would be very apt to find some trouble in proving that the individual members had been damaged a fixed amount."

Cleansing Wax in Salt Water.

In Praktischer Wegweiser it is recommended to boil wax in salt water, watching carefully that it does not boil over. Two or three boilings are said to make the wax clear. The proper quantity of salt is not given.

Miscellaneous News ✣ Items

The Michigan Convention will be held Feb. 23 and 24, at the Eagle Hotel in Grand Rapids. All being well we expect to be present. Since publishing the notices of prizes offered, on page 84, we have been invited to participate, and would say that the American Bee Journal will "give a year's subscription to every man [or woman] who wins any of the other prizes". We hope there will be a good exhibit of honey.

The York Honey Co. is now entirely in the hands of Mr. Henry M. Arnd, who has been the manager of the company since it was formed last spring. We have disposed of all our interest to Mr. Arnd, as per agreement dated Feb. 1, 1905, which also includes, for a specified time, the privilege to use our registered honey-labels, and also the name "York", in the business or firm name. We wish Mr. Arnd the fullest measure of success, as he certainly deserves. Bee-keepers can rely implicitly upon him for an honorable and square deal every time.

Mr. H. S. Ferry, of Westchester Co., N. Y., has sent us a sample of the Ferry hive-opener and also the Ferry bee-brush. Each is attached to a small chain, at the other end of which is a metal eyelet to slip over a button, which insures its presence when once buttoned to the operator. The metal hive-opener is about 4 inches in length, and one end is in the form of a ring. At the other end is a sort of tomahawk, which can be used as a tack-puller, screw-driver and little hammer. The bee-brush is made double, so that bees from both sides of a comb can be swept off with one motion. Both of the articles are ingenious, and doubtless will be offered to bee-keepers through the bee-supply dealers.

The Illinois Bee-Keepers' Bill has been introduced in the State Legislature and referred to the proper committees. The following is a copy of the document:

A BILL.

An Act making an appropriation for the Illinois State Bee-Keepers' Association.

Whereas, The members of the Illinois State Bee-Keepers' Association have for years given much time and labor without compensation in the endeavor to promote the interests of the bee-keepers of the State; and,

Whereas, The importance of the industry to the farmers and fruit-growers of the State warrants the expenditure of a reasonable sum for the holding of annual meetings, the publication of reports and papers containing practical information concerning bee-keeping; therefore to sustain the same and enable this organization to defray the expenses of annual meetings, publishing reports, suppressing foul brood among bees in the State, and promote the industry in Illinois:

Sec. 1.—Be it inacted by the people of the State of Illinois represented in the General Assembly: That there be and is hereby appropriated for the use of the Illinois State Bee-Keepers' Association the sum of $1200 per annum for the years 1905 and 1906, for the purpose of advancing the growth and developing the intercsts of the bee-keepers of Illinois; said sum to be expended under the direction of the Illinois State Bee-Keepers' Association, for the purpose of paying the expenses of holding annual meetings, publishing the proceedings of said meetings, suppressing foul brood among bees in Illinois, etc. Provided, however, that no officer or officers of the Illinois State Bee-Keepers' Association shall be entitled to receive any money compensation whatever for any services rendered for same out of this fund.

Sec. 2.—The Illinois State Bee-Keepers' Association shall appoint at each annual meeting a State inspector of apiaries for one year, or till his successor is elected and qualified, who may, if necessary, appoint his own assistants. Said inspector, or inspectors, shall, when notified of the existence of the disease known as foul brood among apiaries, examine all such as are so reported, and all others in the same locality, and ascertain whether or not such disease exists, and, if satisfied of its existence, shall give the owner or person who has the care of such apiaries full instructions as to the manner of treating them. Within a reasonable time after making such examinations the inspector shall make another examination thereof, and if the condition of any of them is such as in his judgment renders it necessary, he may burn all the colonies of bees and all the comb necessary to prevent the spread of the disease. Such inspector shall, before burning, give the notice provided for in and otherwise proceed pursuant to the provisions of Sec. 3 of this Act. The inspector shall make, at the close of each calendar year, a report to the Governor and also to the Illinois State Bee-Keepers' Association, stating the number of apiaries visited, the number of those diseased and treated, the number of colonies of bees destroyed, and of the expenses incurred in the performance of his duty. Said inspector shall receive $4.00 for each day actually and necessarily spent in the performance of his duties, and be reimbursed the money expended by him in defraying his expenses, provided that the total expenditures for such purpose shall not exceed $700 per year.

SALE OF DISEASED APIARY, ETC.

Sec. 3.—Any owner of a diseased apiary, of honey made by or taken from such an apiary, or appliance taken from such an apiary, who shall sell, barter, or give away any such apiary, honey or appliance, or bees from such an apiary, expose other bees to the danger of contracting such disease, or refuse to allow the inspector of apiaries to inspect such apiary, honey or appliances, shall be fined not less than $50, nor more than $100, or be imprisoned in the county jail not less than one month nor more than two months.

Sec. 4.—That on the order of the President, countersigned by the Secretary of the Illinois State Bee-Keepers' Association, and approved by the Governor, the Auditor of Public Accounts shall draw his warrant on the Treasurer of the State of Illinois in favor of the Treasurer of the Illinois State Bee-Keepers' Association for the sum herein appropriated.

Sec. 5.—It shall be the duty of the Treasurer of the Illinois State Bee-Keepers' Association to pay out of said appropriation, on itemized and receipted vouchers, such sums as may be authorized by vote of said organization on the order of the President, countersigned by the Secretary, and make annual report to the Governor of all such expenditures, as provided by law.

Every bee-keeper in Illinois is requested to write his senator and representatives now in Springfield, urging them to support the above Bill. It should be passed promptly on account of its great need by the bee-keepers of this State, and also by reason of its modest and excellent requirements.

The two committees are made up as follows:

Senate Appropriation Committee: — Gardner, chairman; Hughes, McKenzie, Townsend, Pemberton, Mueller, Juul, Barr, Hamilton, Lundberg, Evans, Hall, Curtis, Templeton, Campbell, Hull, Powers, Burton and Cunningham.

House Appropriation Committee: — Trautman, chairman; Shanahan, Pendarvis, Kerrick, Lindly, Taggart, Dudgeon, Monroe, Rodman, Drew, Miller (of Clark), Glade, McGuire, Smejkal, Hardin, Arnold, Gaunt, Oglesby, Kittleman, Keck, Russell (of Iroquois), Pogue, Coyle, Heinl, Pedersen, Zaabel, Echols, Rose, Donahue, Loy, Grace, Harris, Coleman, Cooke, Rapp, Finnan, Hearn, Witt, Lurton, Schafer, Wilson and Craig.

Rootville's Latest Rootlet.—Last week Tuesday we received the following announcement of the arrival of another boy in the family of the editor of Gleanings:

> Friend York:—An 8-pound boy came to our house last Sunday morning. Both mother and boy are doing finely. He seems to be a very healthy and strong child; hardly ever cries, and sleeps and eats just as any good, strong boy ought to. Sunday morning after, I tried to put on two different collars, and they were both too small; and, finally, when I did get one on it was a tight pinch. I have heard of swelled heads, but never heard very much about swelled necks. I suppose I've got 'em both. E. R. Root.
>
> P. S.—Later.—Just bought a new hat. Had to.

So Editor Root's head swelled so that it extended down into his neck. Sort of "got it in the neck", too. Well, well, it does beat all how certain happenings affect certain people. Suppose Grandpa Root is also putting on "A. I. R.s" just now.

Congratulations to all of 'em.

Maple Sugar and the Sugar Bush, by Prof. A. J. Cook; 44 pages; price, postpaid, 30 cents. This is by the same author as "The Bee-Keepers' Guide," and is most valuable to all who are interested in the product of our sugar-maples. No one who makes maple sugar or syrup should be without it. Order from the office of the American Bee Journal.

Contributed Special Articles

An Experiment with Alfalfa in Illinois.

BY J. E. JOHNSON.

ONE year ago last spring (April 28) I plowed about one acre of ground, then harrowed it twice, after which I sowed 10 pounds of alfalfa seed and 100 pounds of infected soil from the Illinois Experiment Station; that is, soil taken from one of their successfully inoculated alfalfa fields. I again harrowed this little field twice. The weather was fairly favorable, and in two weeks the alfalfa was up, and made a good stand.

The first year I clipped it twice, and let it lay on the ground. Tubercles did not begin to form on the roots until about August or September, and the alfalfa did not look very thrifty. In one corner of this patch the white clover came up pretty thick, and at least half of the alfalfa plants in this corner died out entirely, and very few tubercles formed on these remaining plants.

In 1904 the alfalfa continued to improve except in the corner where the white clover was, and as it began to bloom I visited it frequently. One fine morning in the latter part of June I found that the bees were coming in great numbers from that direction, and the steady, though strong, low hum indicated that a great honey-flow was on. The bees would alight on the ground and alighting-board in front of the hive and rest. Everything seemed to indicate that one of the greatest honey-flows I had seen was at hand; and as there was a steady stream of bees from that field of alfalfa, I at once went to investigate.

Sure enough, there were the bees, but all were coming from or going to the basswood timber down by the creek about half a mile away. A close examination proved that not one honey-bee could be found on that alfalfa. But there were thousands of bumble-bees very busy on it. In fact, I never knew before that there were so many little bumble-bees in this neck of the woods. They all seemed to be about half the size of the old-fashioned Mr. Bumble, with whom I was so well acquainted in my childhood days. Why these bees preferred alfalfa to such a flow from basswood I am not able to say.

Well, in a few days I cut the alfalfa for hay, and it made fine hay; even the hogs would clean up a whole forkful of the dry hay, and both horses and cows like it.

In about four weeks it was in bloom again, and I could find honey-bees working on it every day, but there did not seem to be any great yield of honey; but it yielded some, I suppose, and when it was in bloom again in late fall the bees would work on smartweed until about 10 o'clock, then they would turn their attention to the alfalfa.

The alfalfa has seemed to improve gradually in thriftiness, and its roots are now 3 or 4 feet long in some places, and it has a fair supply of tubercles, but not as many yet as it should have; but in this corner where the white clover got started, there the alfalfa plants have very few tubercles, and some none at all, and the alfalfa looks spindling.

I have observed and studied the actions of this little field of alfalfa very closely, and I feel confident that there is an antagonism between the bacteria of alfalfa and those belonging to white clover. Not that there is a declaration of war between them, but that the presence of great numbers of white clover bacteria has an unfavorable effect on the action of the alfalfa bacteria, I am pretty positive.

It is a well-known fact among bacteriologists that the product of one species of bacteria is often unfavorable to another, and prevents its rapid propagation. For instance, persons having a certain contagious disease are found to be immune from certain other contagious diseases, and can not contract them, even though thoroughly exposed. There is a little white clover here and there all through this field, and in order to smother it out I let the alfalfa stand, and did not cut it the third time. It produced some seed

I neglected to say that I gave this land a light dressing of manure before I sowed the alfalfa. I also applied lime to a part of it, which gave it a little aid, I think. And to part I applied wood ashes, and that little spot on which I applied ashes far outstripped the other, and a much greater abundance of tubercles can be found on the roots in that spot. For lack of ashes I applied ashes only to a spot about 10 feet square. Possibly the soil lacks potash.

I think perseverance will bring about a good growth of alfalfa, as well as a fair yield of nectar. I expect to sow several acres of alfalfa next spring. My neighbors are becoming greatly interested in this experiment, and several have asked for infected soil. I had several visitors who came purposely to see this alfalfa.

From the way this alfalfa grew last year on the best part of the patch, I feel safe in saying that when it has become well established it will yield twice as much hay as common clover, and that it will, with its long roots, not only stand the dry weather better, and not freeze out, but it will bring both potash and phosphorus from a greater depth than any other leguminous plant, thereby adding not only nitrogen but potash and phosphorus as well.

My catnip experiment is as yet only a moderate success, but does well among any decayed rubbish without any shade. I will perhaps tell more about it some future time.

However, I got about 100 pounds of extracted honey that smelled very strong of catnip when I was extracting it. This honey has a flavor very much like hoarhound candy, and we all like it so well that we kept it for our own use. It is a little darker than clover. I suppose it is about half smartweed. I will send a pint jar free to the editor if he will pay express charges. Knox Co., Ill.

[The sample of honey arrived in due time, but we could neither smell nor taste any catnip about it. Some 25 years ago we had a sample of catnip honey that was the real thing, and, compared with that, the sample sent to us by Mr. Johnson has scarcely a trace of catnip honey in it, we think. Mr. Johnson's sample is good enough for any one to eat at any time, while the catnip honey we had long ago would be a good remedy for a certain kind of childish ache—just below the belt!—EDITOR.]

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No. 2.—Bee-Keeping in the Southwest.

BY PROF. LOUIS H. SCHOLL.

[Continued from page 85.]

MANAGING THE BEES BEFORE THE HONEY-FLOW.

IN a previous article were listed the honey-flows as they appear in the different localities, and the readers will therefore have an idea about the time when these flows may be expected, and the length of time the bee-keeper has for bringing his colonies to the best possible condition for them.

WHEN TO BEGIN PREPARATIONS.

With many bee-keepers the idea still prevails that the time to begin preparing the bees for the honey-flow is not until spring, but many years of experience have taught some of *us* that *the right* time to begin is in the fall before. If the bees go into winter quarters in good condition, with plenty of stores, they will come out the following spring ready to make preparations for business when the honey-flow comes. Such colonies will build up rapidly, and populous colonies are one of the most important essentials in producing a large crop of honey. Herein lies the way for success in bee-keeping. Weak colonies, in a poor condition, will not do; they will profit their owner little or nothing at all.

MANAGEMENT THE PREVIOUS FALL.

Begin the fall before by having *good* queens in all your colonies. This is of great importance, for around them centers everything. To have a good queen in a colony means the same as heading a herd of fine-bred animals with one of the best breeders. Of course, all this is well known by the bee-keepers in general, but do they follow such teachings about which they have learned? While some do, it is neglected by entirely too many, and that to their own detriment and loss.

Besides good queens, the condition of the brood-nest should be looked after, that there are no defective or incompletely built out combs; or, as it sometimes happens in some of our Southern apiaries, that there are no pollen-filled combs left in the center of the brood-nest. Sometimes an abundance of pollen is stored in the late summer, and combs are packed solid with it. Such, together with otherwise unsuitable combs, only retard the progress of brood-rearing of the colony in the early spring; and no matter how good the queens may be, they will not be able to do their part unless a brood-nest is provided for them in the best and most suitable manner for their purpose. For this reason it is important to look after the condition of the brood-nest also.

Provide the colonies with *plenty* of stores—for winter? No, not only, but *for next spring also*. Many a time a colony has had enough to live on during the winter, only to starve during the early spring until the honey-flow arrives. This is a decided loss. It retards the progress of the colonies to such an extent that they are not in shape to do the best possible work when the required time comes.

WINTERING THE COLONIES.

Such a subheading looks strange in an article on Southern bee-keeping; nevertheless there is more truth in it than may be supposed, for we *winter* our bees in the South as well as elsewhere, or at least we should do so. This does not mean bee-cellars or chaff-hives, and the like, but it means that the bees are to be prepared for the winter just as outlined above, with sufficient stores, and every colony in good condition, with plenty of young bees. Very little else is necessary in the South during winter. If they are protected from the north and exposed to a southerly location, it is all the better.

The extracting-supers are left on the hives the entire year, and usually contain some honey as part of the winter stores. Later in the spring they are used for brood-rearing, thus providing additional room for the queen; and large hives prevent swarming. Still later, when this room is not occupied with brood any longer, and more honey is being brought in than is used by the bees, it is stored in these supers, thus preventing the clogging of the brood-nest, which so often happens if only a single-story hive is used. Thus, the extracting-supers have an advantage for three purposes if left on the hives—for containing an extra amount of honey for winter stores; in providing additional room for brood-rearing; and furnishing room for storing early honey.

THE HONEY-FLOWS.

In my own locality, and many others, some honey is coming in more or less during early spring, and brood-rearing goes on rapidly, so that colonies soon become very populous. Brood-rearing is begun *very* early, the queens quite often not ceasing their egg-laying at all, in which case some brood is present during the entire year. Therefore it is possible to have strong colonies very early, and ready in plenty of time for the coming honey-flow. The first flow comes in April, from mesquite, and is the one toward which we are building our colonies during the early spring. They should be so managed that they will be in the best possible condition for this flow—strong in bees of the right age for gathering the nectar. Upon this depends the profit of keeping bees.

SWARMING AND PREVENTION.

With everything favorable, swarming might be expected early from such populous colonies, and such will appear as early as the month of February in some years—sometimes later—and often lasting until June or July. This is what we want to prevent if we have an early flow and expect any surplus. For a later flow it may be best to force them to swarm instead of preventing it, as the two, if built up, might store more surplus than if they were not increased. This would be the better plan perhaps if increase is desired. The swarms might be natural or artificial.

SWARMING CEASES WHEN FLOW BEGINS.

If the colonies can only be kept populous and swarming can be prevented until the honey-flow has begun well and the bees have gone to work in earnest at storing surplus honey, then we shall have conquered so much of the problem. The bees devote their whole time and attention to the storing of honey, and seem to forget all about swarming—a fact which is entirely different from those existing elsewhere, especially in the North where the colonies swarm right in the midst of the honey-flow, leaving the hive with supers of sections only partly completed, much to the vexation of the bee-keeper.

There are two ways of preparing your bees for the surplus honey-flow for the best results, when such comes early in the season. One is by preventing swarming altogether, and the other is done by preventing swarming up to a certain time, but forcing them to the swarming condition just before the flow, and then practice "shook swarming". Of these more will be said later, as space here does not allow me to dwell upon it as fully as I would wish to.

Brazos Co., Tex.

[To be continued.]

Convention Proceedings

ONTARIO BEE-KEEPERS' CONVENTION.

REPORTED BY MORLEY PETTIT.

The Ontario Bee-Keepers' Association held its 25th annual meeting in Toronto, in connection with the Provincial Fruit, Flower and Honey Show, Nov. 15, 16 and 17, 1904.

The secretary read the minutes of the 24th annual meeting, which were approved and signed by the president.

Pres. J. W. Sparling's address was then presented, after which Mr. Morley Pettit read the following paper on

EXTRACTED HONEY.

The main products of our industry are comb honey and extracted honey; and in this country we produce the latter much more extensively than the former. It will be seen, then, that my subject is almost as broad as the business itself. It naturally falls into two main divisions: I. The production of extracted honey. II. The care and sale of extracted honey.

The quantity and quality of honey produced depends upon:

1. Weather. 2. Locality. 3. Bees.

1. Weather is beyond our control; but a careful study of conditions extending over several years enables one to forecast with some degree of accuracy, and plan operations accordingly.

2. Locality must be chosen and studied with equal care. The nature of soil, flora and climate are of the utmost importance. The soil should be moist, though not cold, and flora of the honey-bearing varieties. It is desirable to have honey coming from early spring until late fall with two or three sharp intermissions, when bees may kill drones and lose the desire to swarm.

3. I spoke of weather, locality and bees, meaning by the latter: *a.* Race or breed of bees. *b.* Condition of bees.

a. There are three races of bees which play an important part in Canada: Italians, Carniolans, and blacks. Black bees are the most common, and have their good qualities and their champions. They are, however, too excitable to be handled comfortably, and do not defend their hives well from robber-bees and moths. The Carniolans are handy and prolific. They breed up rapidly in spring; but are great swarmers. The Italians are quiet and good workers, defend their homes well, and are not so much inclined to swarm.

b. The condition of bees would include style of hive and management. As we strive for uniformity in the apiary, or set of apiaries, so throughout the Province, country and bee-keeping world, the standard hive should, as far as possible, be adopted. That is the Langstroth hive. For the production of extracted honey I prefer the 12-frame Langstroth hive, with supers of the same size. A good queen will occupy this brood-chamber with brood until the fall flow, when she will slacken her operations enough to allow plenty of winter stores to be crowded in at the sides.

There is nothing about a hive so important as the queen. She is the heart of the colony. From her comes the life-blood, as it were—the young bees to take the place of those which are wearing out and dying. With a good, vigorous queen the brood-chamber is kept full of brood in all stages, from the egg to the young bees emerging from the combs. A populous, energetic colony is assured, ready for any honey-flow that may come. A poor queen allows the circle of brood to become smaller and smaller, and the bees get "lazy" according to the old idea. That is, they dwindle in numbers, lose ambition, and store but little honey. The sooner such a queen is replaced the better.

But the thing most to be dreaded is queenlessness. The bees are working and growing old, while none are hatching to take their place. The combs of the brood-chamber which should be bright and filled with eggs and brood, take on a forsaken appearance, and soon become choked with pollen and honey. I am convinced that if it can possibly be avoided a hive should not be one week without a laying queen at any time. With the present scientific methods of queen-rearing, and the low price at which queens can be obtained, one should always have a few extra queens, of his own rearing or coming by mail, to use in emergencies. The queen-condition of every colony must be carefully watched at all seasons of the year, but particularly in preparing for winter.

The year around management has a direct bearing on the amount of honey produced. During the fall flow every colony is assured a good queen, good worker combs in the brood-chamber, and plenty of stores for winter. In preparing for winter, remember first that in cold weather bees must supply their own heat to keep the hive at a living temperature. They also must breathe like any other animal. Third, their breath is laden with moisture. Fourth, as in any other city of from 30,000 to 50,000 inhabitants, the death-rate is considerable.

The spring management is quite as important as the winter. It is then the breeding-up for a honey-flow is done, and two points particularly must be observed. By all means provide plenty of stores, and conserve the heat of the hive. By the beginning of fruit-bloom most colonies should be ready for a super. At the opening of white clover and alsike in June, the dark honey of the previous fall and present spring should all be removed as far as practicable from both super and brood-chamber. Then put in wedges to enlarge the entrance, and put on two supers containing 11 full Langstroth combs each, with excluder to keep the queen in her place.

The month of June is spent struggling with the swarming problem. By all means, so far as in you lies, hold your colonies together and allow no swarming. With plenty of extracting supers, the tiering-up system is more profitable, as by giving two or three supers to each hive, extracting may be postponed until the height of the swarming impulse is past. Then an adequate gang of men taking off from 2000 to 3000 pounds daily can soon extract the honey. The needed machinery for the yard consists of bee-hats, smokers and brushes; a light cooper's hatchet for prying and scraping, a wheelbarrow with smooth, tight bottom, and a robber-cloth. The extracting-room should be tight enough to keep out bees; but if such a place is not at hand, the smoke from one or two smokers in the room will help considerably to keep them out. Last season I used a 6-frame reversible extractor, and now would buy nothing smaller. It is placed on three legs high enough to deliver the honey into a barrel, and has inside a device which strains the honey before it goes out into the spout. This management, for which I am indebted to Mr. R. F. Holtermann, I have found to be a great saving of time and labor. The can for cappings consists of a square galvanized-iron can large enough to hold all the cappings that two or three men could take off in a day. Fitted within this can is another with perforated-steel bottom to hold the cappings up 6 or 8 inches from the bottom and allow them to drain. Wooden cross-bars on top support the combs, being uncapped. The knives are kept particularly sharp, and in all our operations we study the quickest and easiest way of doing things.

All white honey should be removed by the first of August to avoid any admixture of dark honey. Owing to the great affinity which honey has for moisture it is better, if possible, to extract on drying days. The process of uncapping and extracting exposes so much surface of honey to the air that a saturated atmosphere would thin the honey considerably. In no case should honey be extracted during the honey-flow unless three-quarters capped. It should, as soon as possible, be put into the packages in which it is to be sold, and sealed up. For honey exposed to the air not only absorbs moisture and becomes thin and watery on top, but it loses a certain amount of the delicate flavor and aroma which it has from its native flowers.

This matter of the care of honey deserves attention. The producer should understand thoroughly the nature of honey, what treatment will benefit, and what will injure it. Then seek at all times to educate buyers in this line. I might mention a few points:

Honey is first nectar of flowers. Bees gather and ripen it by evaporation in the hive. The latter process is dependent upon the weather. In dry weather it is ripened quickly and capped. In damp weather little capping is done. In our climate honey extracted thin can seldom be thickened by any process which will not injure flavor and color. The point to be made is, that honey should be well ripened by the bees, then extracted dry, and sealed up as soon as possible.

The natural condition of honey is first liquid, then crystallized. As agitation hastens crystallization in a saturated solution, so it hastens the granulation of honey. Stirring, straining, dripping through cappings, the jar of machinery, changes of temperature which cause contraction and expansion, all hasten granulation. To repeat the comparison: One crystal dropped into a saturated solution of a salt causes the whole to crystallize quickly; so a few grains of honey left in the combs or cans from last year, or mixed in the honey, make it granulate sooner than it otherwise would.

As honey is a natural product—not manufactured—it should be sold in its natural condition. Many prefer it liquid because they do not understand that it should granulate. As we desire to educate the public to eat more honey, we should teach them that its natural condition is granulated. Of course, we must give the buyer what he wants, but use our influence to make him want granulated honey.

The package must be chosen to suit the trade. For liquid honey glass seems to be preferred. For granulated honey use tin, wood, or paper, but not glass. Cultivate the home market. See that every house is supplied.

Further points which I have missed will no doubt be brought out in the discussion.

The points which I would emphasize in the production of extracted honey, study your weather, climate, and locality. Choose the best breed of bees and the right style of hives, and keep both in extra condition the year around. Give extra attention to the queens and the wintering, and allow no natural swarms, and as few as possible artificial ones. Do not extract honey until well ripened, then seal it up as soon as possible. Study short cuts in working. Study your market. Sell to the best advantage possible, and make good use of your money when you get it.

MORLEY PETTIT.

In opening the discussion on Mr. Pettit's address, R. H. Smith endorsed the main points, emphasizing the effect of climate and atmosphere on honey. Methods of extracting which might do for California or Colorado would not do for Canada.

G. H. Sibbald—The plan of having two supers on every hive is all right, but if a colony were a little weak, to raise the super up and put another under would not work well. Mr. Pettit's point in urging the importance of queens is good.

Mr. Pettit—If the colony is too weak for two supers, or you have not enough supers to put two on each, you might extract only the best-filled combs from the super each time over the yard. The balance should be placed together at one side of the super, to be finished while the empties are being filled.

James Armstrong recommended taking combs of thin honey from weak colonies and giving them to strong ones to be ripened.

SIZE OF HIVES.

There was a lengthy discussion on the size of hives.

R. F. Holtermann—The great point is to keep your bees together so they do not swarm. The larger hive rightly managed will do that.

Mr. Sibbald—To keep bees from swarming, one must keep the brood-chamber from clogging with honey. In a large hive one can not do this, for they will crowd it in around the brood, then swarm as much as ever. To get well-ripened honey one must make the bees crowd the honey up into the super.

Mr. Holtermann—I find by experience that a good queen will have as little honey in a 12-frame brood-chamber as in an 8-frame. If you can keep the bees from swarming, that is the point.

CARE OF HONEY.

Wm. McEvoy puts his honey into tanks and covers over tight for a few days, then skims off the foam. In what he skims off he finds fine specks.

Mr. Pettit—If the honey is well strained there is no need of any further skimming. The foam which rises on the top is just honey—same as the froth on a milk-pail is only milk.

Mr. Holtermann—Thin nectar may rise to the top. Then moisture is absorbed at the top of the can and makes the honey thin. This is the only difference between the surface honey and any other. Honey should be sealed up as soon as possible.

E. Dickenson, Jr.—This skum, if allowed to stand, goes back to honey.

Mr. Armstrong had found quantities of wax in the foam which rises on honey that has been strained. Liquefying honey brings more foam to the top, and in this is wax.

Mr. Dickenson uses a milk-strainer wire-cloth for straining.

Mr. Deadman criticised the use of a wheelbarrow. He would use a wagon and tier supers up six high. He can draw 500 pounds, or, on level ground, 1000 pounds, with one ahead to draw and one behind to push.

Several spoke in favor of the wagon on smooth ground, but where out-yards are in uneven ground the wheelbarrow requires only one track. Then Mr. Pettit pointed out that the specialist has so many things to move when he moves his bees that a wagon seems an extra burden. Every farmer has a wheelbarrow which can be borrowed.

(Continued next week.)

Our ✣ Sister Bee-Keepers

Conducted by EMMA M. WILSON, Marengo, Ill.

Starting with Bees—Selling Honey—Bee-Stings.

Five years ago I purchased an only colony of bees from a neighbor for $2.50. I knew nothing about bees. That was in early spring, and about the second week of June I thought it time to put on the "upper story", as we called it. By the last of July I examined it, and found to my joy and surprise it was full. I managed to get it off, and it was leaned against a tree, a little way from the hive, to let the bees crawl out. It was left there all that day and part of the next, until the bees seemed to be carrying the honey out, and it was taken into the cellar.

There were so many bees, and no super to put on, we thought we would try to divide them. We took out two frames of brood and put in some old empty frames and made two new colonies. That was so late that all the bees died in winter.

A friend let us take some old copies of the American Bee Journal, and we read those and found out if we wished to keep bees we must read. We sent for the Bee Journal, and got all the books we could and spent the winter in reading.

In the spring we bought 4 colonies of black bees. They were regular hornets. We increased to 9 by dividing or by taking a frame of brood from each colony that we could and giving them an Italian queen; by fall they were very strong.

We got a good supply of honey that season, averaging about $4.00 worth a colony, besides what we kept for home use. We did not lose a colony that winter, and increased to 13 with a fair honey crop the next season.

The season of 1903 was a good one, as we had 1300 pounds of extracted and 800 pounds of comb honey from 29 colonies, spring count.

Last season we had 35 colonies, spring count, and about 325 pounds of extracted and 300 pounds of comb honey. I began to sell my first super of honey, and have had such a demand for both comb and extracted honey the past year that I could not supply half of my customers. I sell all from house to house. The extracted is put up in quarts, half-gallons and gallons. I have regular customers who wait for their winter supply. I never sell any honey that is not nice and does not look No. 1.

Some order honey from the house, or take it when they come for their berries. I get 8⅓ cents for all extracted and 12½ to 15 cents for comb honey, according to the quantity wanted.

I mold the beeswax in small cakes, and sell at 5 cents a cake, which brings me 45 cents a pound; or 40 cents a pound for large cakes of 4 to 6 pounds to the laundries.

We use now only the 10-frame dovetailed hive. There is very little trouble in hiving a swarm when one does issue, as the bees always settle on a low tree near the apiary. Last season it seemed as if every swarm would settle on the same tree. We try to keep down swarming by dividing, and keep them strong by sometimes moving the combs of hatching brood from one colony to another, giving the strong one empty combs.

The bees sting me very much, and it always swells and feels bad; while the helper they very seldom sting.

We winter some of our bees in a cellar and some in the house-cellar. Forty colonies went into winter, but I fear some were a little light.

I like the Sisters' department, so that is why I try to do a little. If you think this any good, I may tell what we do next season. MRS. J. E. MILLIGAN.

Linn Co., Iowa, Jan. 16.

You have no doubt by this time realized that one can not be too careful about not leaving honey exposed in the apiary. It is almost sure to start robbing unless nectar is coming in very abundantly.

You did not say anything about taking any bees with the two frames of brood that you took to start those 2 colonies with, but I suppose you took the adhering bees with them. One frame of brood and bees is not enough to start a nucleus with at any time of year early or late, for many of the bees will return to the parent colony. Two frames of hatching brood well covered with bees is the very least that should be taken, and usually three would be better, especially if rather late in the season. Of course, I am not referring to baby nuclei, or several nuclei, in one hive for queen-rearing purposes, but nuclei for increase. It is much better to have them strong to begin with.

You certainly have been very successful in your venture, also in disposing of your beeswax to such good advantage in your home market.

One reason why you are stung more than your helper may be that you make quick, nervous movements, while your helper does not. Watch and see.

By all means let us hear from you as to the results of next season's work. We heartily bid you welcome to our corner.

Among the thousand and one remedies recommended for bee-stings, there is at least one which might be called a woman's remedy—the washerwoman's Javelle water—which is used to take out fruit-stains and the like. Whether effective or not, it is probably as good, at least, as the average bee-sting remedy.

Some Facts About Honey and Bees.—This is the subject of an article written by Mr. J. E. Johnson, and published on pages 581-82 of the American Bee Journal for Aug. 25, 1904. We have republished it in 4-page leaflet form for general distribution, and furnish it, postpaid, at 35 cents per 100 copies. Send all orders to the office of the American Bee Journal.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

BEE-KEEPERS A CLOSE CORPORATION.

So Editor Hutchinson can peacefully contemplate our craft reduced to such a close corporation that bee-papers would cease to exist. Bee-men too few to support papers. Now my feelings are inclined to "rage and pitch" a little at such a prospect as that. How is it with thee, gentle reader? Page 874.

DIVERSE CONCEPTIONS OF APICULTURE.

What a lot of diverse conceptions of apiculture comprise the A, B, C, D of the thing! And what a contradictory mix societies and conventions and journals oft make of the incongruous list! Quite enough to make Pegasus wake up and snort.

A's Apiculture—nice, rural side-show,
Lo a few hives, set up seven in a row,
Where'er you go.

B is Bee-Ology—science the best;
Pays us in wisdom, life, profit and zest—
Come and be blest!

C is cute Charity's bee-keeping plan,
For the pantry and purse of each laboring man—
Teach him, who can!

D is trust Dives—and sooner be hung
Than drop a cool dewdrop on Lazarus' tongue—
Go it—you're young!

A MISSOURI PROVERB AND HONEY-PRODUCTION.

A good Missouri proverb is that furnished by Mr. Calhoun, page 874: "No one so far from market as he who has nothing to sell". Same class of proverbs as Solomon's, "Where no oxen are the crib is clean". The world over, in all ages, it seems to be the case that nothing tends to beget nothing—and abundance of something good tends to find its way where it is needed. But a turnip is not going to ship a jug of warm, red blood—too far from market. Also, the Missouri proverb kind o' brings us around toward the encouraging fact that there is never so much honey produced in our country as ought to be eaten in it. No fundamental impossibility to trouble us.

BEE-KEEPING IN RUSSIA.

So Russia mostly uses hives of the kinds without frames; but the proportion of frame hives steadily and rapidly increases. It was 13 percent in 1894; now probably over 26 percent. In the 17th century, and previous apiculture (or api-*capture*), was very prosperous; and there were large amounts of both honey and wax to export. Now the nation pays out $2,000,000 a year for bee-products. Like good, thrifty people they are scratching around to see if that sum can not be saved by improved apiculture; and thus it comes about that their representative, Mr. Abram Titoff, has been for some two years searching the United States for ways and ideas that may perchance make Russian apiculture more profitable. Mr. Titoff's paper read at St. Louis is a very noteworthy document. To help stimulate the declining industry the tax on bees was removed more than 100 years ago. Pages 878-880.

CANDY-MAKERS AND ADULTERATION STORIES.

Misery loves company. It soothes us some to learn that the national society of candy-makers has to struggle with prevalent lies about adulterations of candy. The case of flour is not quite similar. No amount of lying about flour would bluff people off from using it; but when candy and honey are believed to be spurious and unwholesome consumption declines. Page 881.

A QUEEN YARN TO KILL THE HONEY YARN.

A fib about a regular trade in queens at $50 to $200 each is not a yarn that we need to get infuriated at. Wonder if we can not turn it to good use. Lies oft devour each other; and we should be happy in seeing a harmless lie devour a pestilent one. Tell the good people that if honey were all manufactured by machinery, interest in queens would surely die out; and there would be no fancy prices. Queens can't do anything toward manufacturing honey except in the old-fashioned honest way. Page 3.

IMPORTANT OMISSIONS APT TO MISLEAD.

How often a comrade in print leaves us utterly in doubt whether what he is giving us is remarkable and important or very much a matter of course—all by omitting to tell us a few necessary things. About California's 8th question (page 8), as many as three different theories suggest themselves. Supposing that he increased 3 colonies to 54, he hardly gave them a chance to swarm that year. Increasing 54 to 65 would leave room for some swarming; and of 65 run for a season without any artificial increase we would of course expect some swarms. Swarming, however, is a very lawless matter—to present view. It is quite impossible to forecast it. A season with no swarms when we expected and wanted some is not unusual; and to have two such in succession is only mildly surprising. But a second supposition is that all increase was by purchase, and that he manipulated them in the same way with intent to prevent swarming. The third supposition is the same, leaving out the manipulation—simply did nothing, and just tells us of three years without swarming as a natural wonder.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Spring Stimulative Feeding of Bees.

Will what is termed "Yellow C Bright" sugar do to make syrup for stimulative feeding in the spring? I see it is quoted considerably lower in price than the granulated sugar. If it is as good, and has no ill-effects on the bees, I am thinking of using it next spring.
Missouri.

Answer.—Any kind of sugar that bees will accept will be all right to feed in the spring after the bees can fly daily. It is generally considered that granulated sugar is as cheap in the long run as sugars of lower grade at less cost. But it is possible that there may be some mistake in this, provided there is very much difference in price.

As you say you are "just a beginner", it may be well to remind you that there is danger of doing harm rather than good by stimulative feeding, for those who have not had much experience. Indeed, many of those who have had long experience do not find it advisable to practice stimulative feeding at all.

Cleaning Brood-Frames—Fumigating Foul-Broody Hives—Prevention of Swarming.

1. In boiling frames to get the wax and propolis off, do you know of any acid that will help the matter along? I have had foul brood, and want to clean up and disinfect the frames.

2. I have been experimenting with formaldehyde, using a formaldehyde generator by boring a hole in the back of the hive, close to the ground, so the fumes could penetrate the brood-nest. In doing it that way I fill the hives and supers full of the fumes. What do you think of it?

3. Last summer, in manipulating my bees to prevent swarming, I took two frames of brood with sealed queen-cells on them, intending to leave the parent queen in the old hive. But by having my attention taken away from my work, I took the old queen along with the two frames. The old colony did not swarm, and I got 70 pounds of honey from it; in fact, it produced nearly twice as much honey as my other colonies where I kept the queen-cells destroyed and did not divide in any form. What do you think of that plan? Do you think it will work out that way every time?
Illinois.

Answers.—1. I don't know. It is possible that a liquid preparation of formaldehyde might answer, but I am ignorant on the subject. It is pretty generally agreed now that it is safe to use hives that have contained foul brood, and it is possible that it would be just as safe to use frames that had been boiled.

2. I have had no personal experience, and the testimony of those having had experience is conflicting. It is possible that the failures are owing to lack of thoroughness.

3. No, you can't always be sure of the same result, for in many cases—probably in most cases—taking away two frames of brood and bees with the queen would result in a swarm from the old hive as soon as the first young queen was old enough to go with the swarm. You may forestall that action, however, by cutting out *all* queen-cells as soon as the first queen has left her cell, or the next morning after the first evening when piping can be heard in the hive. But don't count too much on the plan; you're not likely to get any more honey than you would if the colony should be left entirely alone, *provided* the colony of its own sweet will should entirely refrain from all attempts at swarming—indeed, you'd probably get more honey in the latter case. The unfortunate feature in the case is that bees are not always willing to refrain from swarming.

Movements of the Cluster of Bees in Cellar-Wintering—Mating Queens in Confinement.

By observation, I am led to believe that a colony of bees wintered on the summer stand in an 8 or 10 frame hive, with honey in all of the combs, does not move to a new place when a warm spell gives them the chance, but spreads out the cluster and carries the honey to the old place, until it gets too cold again, then they draw back about where they were at first.

1. What are the facts in the case?

2. Do bees in the cellar change the location of their cluster during the winter?

3. If one were to discover a way to mate successfully queens in confinement, would it be of any great practical value to the craft?

4. What recompense could one rely on, to follow success? Experiments along this line, I think, are rather expensive, and require much care and time.

5. Please give us a sample page out of Dr. Miller's record-book.
Illinois.

Answers.—1 and 2. Bees do both ways, both in the cellar and out. Sometimes honey is carried from an outer comb, without changing the place of the cluster. Usually the cluster moves gradually backward or upward, as the bees eat their way into the full combs.

3. In special cases it would; in general, probably not.

4. The greatest recompense would probably be the satisfaction of having conquered a difficulty generally considered unconquerable.

5. It wouldn't do to give a whole page; there would be a gibbering maniac in the Bee Journal office if one of that troublesome crew should attempt to get such stuff into type, but I think I'll risk giving one-third of a page, containing the full record of one colony:

24 72 96 120
50
Apr 29 q cl good May 11 g 1 br & b br in 4
03 19th 4 br 25th t 1 br & b br in 5 Jun 1
t 2 br & b 4 br 13th July 11 kleg

Translated into the United States language, that means that 50 is the number of the colony. The "03" under the 50 means that the queen was born in 1903. The figures at the top are the numbers of sections taken. First time, one super of 24 sections was taken, and the number 24 was put down. Next time two supers were taken at the same time, and 72 put down as the whole number up to that time. Then another super was taken, making 96, and the last time made 120 as the total for the season from that colony. If the last super had been only half full, the number would have been 108.

The remaining record runs: *Apr*il *29* I found that the *q*ueen was *cl*ipped, and the colony was *good* for that time of year. *May 11* I *g*ave the colony *1* frame of *br*ood *&* its adhering *b*ees; and when that was done there was *br*ood *in 4* of the combs. May *19th* there were *4* frames of *br*ood, no frame being less than half full of brood. If one or more of the frames had been less than half full, the entry, instead of being "4 br" would have been "br in 4". May *25th* I *t*ook *1* frame of *br*ood *&* adhering *b*ees, leaving *br*ood *in 5* combs. *Jun*e *1* I *t*ook *2* frames of *br*ood *&* *b*ees, leaving *4* combs well filled with *br*ood. June *13th* I put on the first super, *July 11* I *k*illed *1 eg*g; that is, I destroyed one egg in a queen-cell. Evidently there was no further attempt at preparation for swarming the remainder of the season, no record being made if neither grub nor egg was found in a queen-cell.

The above is a true transcript; but not all colonies made so little attempt at swarming, while a few made no attempt whatever.

You will see that in the foregoing translation I have put in italics the letters that are in the actual record.

Transmission of Bee-Traits—Krainer Bees—Old Brood-Comb and Size of Bees.

1. Are the good and bad traits of bees transmitted through the drones as much as through the queens?

2. Have the Krainer bees from Krain, Austria, ever been imported to this country? Are they more hardy than Italians?

3. How many years constant use for brood can worker-comb be used without diminishing the size of bees? I have read that the cocoons left behind imperceptibly diminish the size of the cells of the future occupants, and prevent the bees from attaining their full development and size.
New York.

Answers.—1. It is generally considered so; indeed, I think the preponderance of opinion is that the disposition of the offspring depends more upon the drone-father than upon the queen-mother.

2. You have probably read and heard quite a little about Carniolan bees. Well, Krain is merely the German word for Carniola. I'm not sure whether the claim for greater hardiness has been well established, but some think well of a cross with Italians.

3. I have combs that are 30 years old or more; and I can not see that the bees reared in them are any smaller than those reared in new combs. I remember that one of the patient foreign investigators—a German, I believe, whose name does not now occur to me—took the trouble to measure the contents of cells in combs very old and new, by actually filling them with liquid, and he found that the old cells contained just as much liquid as the new. The idea that the cells become smaller with age has been taught faithfully for many years, and there are still some who advise that combs be renewed every four or five years, but I think the idea is based only upon theory. Without any careful examination, one might easily conclude that as something more than was there before is left in a cell every time a young bee is reared in it, the cell must necessarily become smaller. But examine carefully, and you'll find that the diameter of the cell at its mouth remains the same. You will probably find that the bees gnaw out some of the cocoons at the sides, leaving it at the bottom. That, of course, will make the cell shallower, but to make up for it the bees add fresh wax to the cell-wall at the mouth of the cell. If they add to the cell-wall at the mouth, that ought to increase the thickness of the comb oughtn't it? Well, that's exactly what it does. Measure the thickness of a piece of worker-comb from which the first batch of brood has just emerged, and you will find it measures 7/8 of an inch. Take one old enough, and it will be fully an inch thick, and you will find the septum 1/8 of an inch thick. The only practical danger is that if the combs get to be old enough the spacing from center to center may become too small; in other words, the space between two combs becomes smaller. Don't worry about good, straight combs being hurt with age.

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Reports and Experiences

Results of the Season of 1904.

I started in the spring of 1904 with 67 colonies and got 4500 pounds of extracted and 3700 pounds of comb honey, and increased to 140 colonies. I took 300 pounds of extracted honey from one colony. I am only a novice in bee-keeping, but I am learning. I have the "A B C of Bee Culture" and Prof. Cook's and Dr. Miller's books, and the best of all the "Old Reliable". PAUL JONES.

Polk Co., Minn., Jan. 11.

Bee-Keeping in Arkansas.

I have some fine Italian bees that came from Illinois. I had them shipped to me in the fall, and they stored about 3 frames of nice honey in October.

I have secured 100 pounds of surplus honey from every strong colony during the past 3 years.

My apiary is well located 64 miles from Little Rock on the Rock Island road. I have been keeping bees here for the past 4 years, and have been a subscriber to the American Bee Journal the most of that time, and have read some good books and papers on bee-culture. I can sell all the honey I can produce right here and in neighboring towns at 12½ cents per pound.

I believe bee-keeping in Arkansas can be made a success. It is a fine State, and has lots of rich soil yet undeveloped.

Yell Co., Ark., Jan. 2. A. E. STONE.

The 4x5 Section vs. the 4¼x4¼.

The 4x5 section is receiving a great deal of attention lately, and much is being said about it, but it seems to me a rather one-sided discussion. Let us look into the subject a little:

Its strong points or desirable features are too well known, (being set forth in nearly every catalog or paper that one may pick up), to be mentioned here. We will dwell only upon its most noticeable flaws.

Did you ever think, when putting full sheets of foundation into sections, that the 4x5 takes more than the square ones? Well, it does; and at the present prices, or 70 cents per pound, it costs about 66 cents per thousand more for these than for the old-fashioned square ones. I am supposing, too, that the foundation is cut to fit them. If regular

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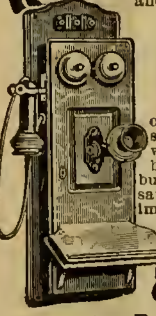

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goods are used the cost will be a great deal more, on account of waste.

It is a mathematical fact that a sphere contains the greatest solid contents in relation to its surface, of any solid; i.e., that a sphere having 100 square inches of surface will have a greater number of cubic inches contained in it than any other solid having the same area. But we can not have a spherical section, for various reasons. The nearest approach to it that we could use would be one in the form of a cube. This is hardly desirable because it would be almost too small to put foundation into, and would look small when filled. However, we can use the 4¼x4¼ plain section, which is the nearest approach to it.

Let some scientist figure out for us how much more comb or wax it takes to fill a 4x5 than a square section, then let him multiply this by 10 to 25, which I think is the number of pounds of honey commonly claimed to produce a pound of wax. Again, let him multiply by 15 cents, the price per pound of the honey, and this product by 1000. We will then know how much we lose on every 1000.

Then, too, there is the first cost. Section-holders for these boxes cost $2.25 per 100, while those for others can be obtained for $1.90. Other goods are in proportion. One

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grown in blizzard belt of Northern Iowa are healthy and full of vigor. We grow them by the million, and our prices are the lowest. To introduce them we will send 12 choice 2-year-old trees free of charge to each property owner reading this advertisement. Postage 5c—send it or not, as you choose. Postal brings them with price list and sheet of *bargains*.

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hundred section-holders will hold 400 sections, so that it takes nearly 300 of them to hold 1000 sections—a difference here of $1.05 in 1200 sections. But you will say, "I won't have to buy supers and section-holders every year." Quite so, but your money is tied up in them, and you are losing the interest, and I tell you that if bee-keepers make a living they have to look out for such things.

There are possibly other things against the 4x5 sections, and many things in their favor. Please do not understand me as condemning them. I have just mentioned a few points that seem to have been overlooked. I use a few of them myself, and find them entirely satisfactory, except in the several ways mentioned above. ROBERT H. SMITH.

St. Lawrence Co., N. Y.

Home Market's Demand and Supply.

The invitation on page 19, for those who can sell more honey in the home market than they produce, to tell the rest how they accomplish it, induces me to relate my experience, although it really seems to my mind a trifle tame.

I am a practicing physician, and some 10 or 12 years ago I purchased a colony of bees, thinking they would furnish me some needed

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The big brother of the original or Illinois type of Reid's Yellow Dent. Bred to fit the Iowa idea of longer ears, rougher grains, plenty of vigor, and a big yield. Same perfect form, handsome color, deep grains and straight rows, but a bigger, better type every way. I sell it either ear or shelled. Catalog, photographs, and samples free and I throw in a package of watermelon seed and one of flower seeds besides. Send for them today.

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"The ear seed corn man."

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All leading races. Bees and Nuclei in any quantity for distant shipments a specialty. Send for circular and prices.

Honey and Wax.

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that poultry pays a larger profit for the money invested than any other business; that anybody may make a success of it without long training or previous experience; that the Reliable Incubators and Brooders will give the best results in all cases. Our 20th Century Poultry Book tells just why, and a hundred other things you should know. We mail the book for 10 cents. Write to-day. We have 115 yards of thoroughbred poultry.

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DADANT'S FOUNDATION
MEANS
Solid, Straight, Well-Built Combs.

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about good wheels and good wagons that will save you a lot of work and make you a lot of money—the
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By every test, they are the best. More than one and a quarter millions sold. Spokes united to the hub. Can't work loose. A set of our wheels will make your old wagon new. Catalogue free.
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INCUBATORS AND BROODERS
acknowledged by experts to be the most profitable machines made. Winners of 385 First Prizes. Write for *free* catalog with proof and valuable information for beginners.
Prairie State Incubator Co.
Box 354, Homer City, Pa.
Please mention Bee Journal when writing.

recreation and supply our own table with honey. When I was 17 years old I lived several months with an uncle and aunt who made a specialty of bees, and during that time I picked up some rudimentary knowledge of the business.

Well, I gave that first colony such good attention that they not only supplied our table and my wife's mother's table, but we had a good many pound sections to give to friends or relatives. At first I refused to take money as I was not in the business for gain. I did not myself belong to any church, but always tried to help all denominations when I could, so it happened that every minister in town, or that came to town to hold service, was sure of at least one pound of my honey every year.

In a few years the number of colonies increased to 3 or 4, and I told my wife and boy they might sell what they could spare after our near relatives and all the preachers had been well treated. Since that time there has never been a season we could not have sold at from 15 to 20 cents per section, several times as much honey as we had to spare.

Last summer I increased to 12 colonies and Italianized all of them, purchasing queens from 3 different dealers, thus seeking to get a mixed strain. Several people have already spoken to me for honey, although January has not yet passed.

As to the final outcome I am not very sanguine. We have in this locality so many years that bees do almost nothing. There has been in the last decade such a slaughter of basswood trees, and the white clover is so very uncertain, that whoever keeps bees in

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Big 140-page catalog alone, 4c.
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THIS LIGHTNING Lice Killing Machine
kills all lice and mites. No injury to birds or feathers. Handles any fowl, smallest chick to largest gobbler. Made in three sizes. Pays for itself first season. Also *Lightning Lice Killing Powder, Poultry Bits, Lice Murder, etc.* We secure special low express rates. Catalog sent free. Write for it.
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4% Discount to Feb. 1st
on the **Best Dovetailed Hive** made. Cheaper than the cheapest. Circular ready to mail. Don't miss it. 200 second-hand hives for sale cheap.
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Hardy varieties; yield big crops. Grafted Apple, 4½c; Budded Peach, 3½c; Black Locust Seedings, $1 per 1000; Concord Grapes, $2 per 100. We pay the freight. Catalog. English or German, free.
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GRIGGS ✣ BROS.
521 Monroe Street,
TOLEDO, - OHIO.
4A23t Please mention the Bee Journal.

CONVENTION NOTICES.

Utah.—The Utah Bee-Keepers' Association will hold its spring convention in the Mayor's Office, City and County Building, April 7, at 10 a.m. All are invited. Matters of great interest to bee-keepers, and horticulturists will be considered. Cache Valley's experience of killing the bees by poison spraying in the bloom must not be repeated. Jot down your thoughts on this or any other question, and bring or mail the same. G. E. GARRETT, Sec.
E. S. LOVESY, Pres.

Michigan.—The Michigan State Bee-Keepers' Association will hold its annual convention Feb. 23d and 24th, at the Eagle Hotel in Grand Rapids. The Eagle Hotel is located at 65 to 71 Market St., cor. of Lewis St., one block south of Monroe St. It will give a rate of $1.50 per day, and furnish a room free for holding the convention. The Michigan State Dairymen's Convention will meet in Grand Rapids at the same time, and advantage may be taken of this fact to secure reduced rates on the railroads. When buying your ticket, ask for a certificate on account of the Dairymen's Convention. The secretary of the Dairymen's Association will sign this certificate which will then enable the holder to buy a return ticket for one-third fare.
W. Z. HUTCHINSON, Pres.

HONEY AND BEESWAX
When consigning, buying or selling, consult
R. A. BURNETT & CO.,
166 SOUTH WATER ST. CHICAGO, ILL.

the future will have to calculate on feeding to such an extent as to make the profits somewhat uncertain.

In this village, too, there are a good many people trying to keep bees in unscientific ways. It surely must be that there are too many bees for the amount and kind of pasturage. This evil will probably remedy itself ere long.

As I think over what I have written I strongly suspicion that if I had been really trying to create a market for honey, the results might have been different.

Several times I have had occasion to inform people that artificial comb honey is never made, and that I am authorized to offer $1000 for a pound of such. DAVIS R. EMMONS.
Champaign Co., Ohio, Jan. 27.

Feeding Bees In An Observatory Hive.

On page 40 is a query concerning feeding bees in an observatory hive. Dr. Miller will pardon me for saying that he has not given good advice in his answer. If it were late in fall it would, indeed, be best to give the full comb of honey; but the question reads otherwise. To take away the frame from an observatory hive means more than a mere furnishing of food, for this hive has all-in-one-comb its entire assets in honey, pollen, and brood. It would not be advisable to give a comb of honey then any more than to give a full colony a set of combs of honey for its own combs.

Nor would it be wise to feed "Good" candy. The bees could not make good use of it for keeping up breeding, and at the best would be a discontented lot of bees.

"New Jersey" took the right place to feed his bees, but did wrong to place the food in an open saucer. Had he filled a tumbler with the feed, inverted the tumbler in a saucer, and placed a pin under the edge of the tumbler, he would probably have had no difficulty with robber bees. Obviously, bees can not protect an open dish of honey, but bees can protect a thin crack of honey. Then, too, the open dish is inviting robbers by throwing out a sweet odor, but the tumbler furnishes practically no odor.

If the observatory hive is tight at the bottom it is well to pour half a cup of syrup right into the hive when the bees are urgently in need of feed; if robbers get in, expose the hive to light and the confused robbers will not be able to find the entrance before they find death.

Yes, "New Jersey," you can winter bees in observatory hives, if you follow the right method. I wintered one winter before last, two last winter, and am wintering two this winter. They winter just as well as one could ask. I expect my earliest swarms from those hives next spring. ALLEN LATHAM.
New London Co., Conn.

BEES FOR SALE
I wish to sell 40 colonies of Bees. They are the Italian Strain, in a good, strong condition, and are wintering good. Reasons for selling: No time to take care of them. Will sell all, or 5 or 10 colonies. Inquire of
F. M. SCHEDER,
7A4t PRESTON, IOWA.

Wanted Position by young man to care for Bees. Best of references given. North preferred.
7Att C. A. WORTH, FALMOUTH, IND.

450,000 TREES
200 varieties. Also Grapes, Small Fruits etc. Best rooted stock. Genuine, cheap. 2 sample currants mailed for 10c. Desc. price list free. Lewis Roesch, Fredonia, N.Y.

The Rietsche Press
Made of artificial stone. Practically indestructible, and giving entirely satisfactory results. Comb foundation made easily and quickly at less than half the cost of buying from the dealers. Price of Press, $1.50—cash with order. Address,
ADRIAN GETAZ,
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Low in price. Fully guaranteed. Send for free catalogue.
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Sweet Clover Seed
FOR SALE
50 lbs. or over, at 5 cents per pound. Address,
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I publish and recommend to you THE RURAL BEE-KEEPER, the best all-around 50-cent monthly bee-journal in America. On trial 3 months for this ad. with 10 cents. Clubbed with this publication both for one year for $1.25; or send us 25 cents for a 3 months' trial and your name and address on a 2-line rubber stamp; self-inking pad, 25c extra. Or send $1.00 and get The Rural Bee-Keeper and an Untested Italian Queen-Bee. Sample copy free. Agents get liberal terms.
Putnam Makes Good Bee-Hives
And sells them at reasonable prices. New catalog now ready. Address,
W. H. PUTNAM.
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200 Rabbeted L. Hives, 8-frame, 1½-story, new, in flat, in 10 lots, 95c each; 100 10-frame, $1.10 each. 89,000 No. 1 Polished Sections, $3.75 per M. 1000 pounds White Extracted Honey in 60-lb. cans, 7¼c.
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LICE SAP LIFE
That's how they live and thrive. You can't have healthy, profitable fowls or stock and have lice too.
Lambert's Death to Lice
promptly kills all insect vermin and makes sitting hens comfortable. Sample 10c; 100 oz., $1.00 by express.
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Tin 4-in. Smoke Engine 3½-inch 3-inch 2½-inch 2-inch Wonder
$1.50. $1.10. $1.00. 90c. 65c—per mail.

Sent on receipt of price per mail.

T. F. BINGHAM, Farwell, Mich.

Otisville, Pa., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine.
Fred Fodner.

Honey and Beeswax

Chicago, Feb. 8.—The trade in honey is still below the normal in volume with prices unchanged, except that the pressure on the part of the holders to realize is more urgent. Fancy white comb honey, 12½@13c; No. 1, 12c; off grades, 10@11c. Extracted, white, 6@7c, according to flavor, quality and package; anything off is lower; amber grades, 5½@6½c. Beeswax, 30c per pound, if clean and good color.
R. A. Burnett & Co.

Boston, Feb. 8.—Sales of honey still continue light, principally on account of the extreme cold weather which we are having. On account of the large stocks in hand, prices that we have quoted are shaded in round lots. Fancy white, 15@16c; A 1, 15c; No. 1, 14c. Extracted, from 6@7c, as to quality.
Blake, Scott & Lee.

Kansas City, Jan. 9.—The demand for comb honey still continues light, as most of the retail dealers were stocked up on $2.25 honey before the holidays, two cars of which were sold here at that time. We look for a better market in the near future, and quote: Fancy comb, 24-section cases, $2.50; No. 1, $2.25. Extracted, white, per pound, 6@6½c; amber, 5½@6c. Beeswax, No. 1, 28@30c.
C. C. Clemons & Co.

Cincinnati, O., Feb. 7.—Comb honey is now coming in more freely, and prices if anything have moderated a little. The sales made and prices obtained were for No. 1 fancy water-white comb, 12@13½c; single cases, 14c. Extracted is sold as follows: White clover, in barrels, 6½c; in cans, 7¼@8c; amber, in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c.
C. H. W. Weber

Philadelphia, Feb. 8.—The market of all grades of comb honey continues rather weak and trading light, with a good supply on hand. We quote: Fancy white, 15@16c; No. 1, 13@14c; amber, 11@12c. Extracted, white, 7@8c; amber, 6@7c. Beeswax, 28c.

We are producers of honey and do not handle on commission.
Wm. A. Selser.

Cincinnati, Dec. 30.—Since our last report was published, the price of extracted honey has advanced, no doubt acting in sympathy with the sugar market. We quote amber extracted in barrels at 6@6½c; white clover, in barrels and cans, 6½@8½c. Fancy comb honey, 13@14c. Beeswax, 28c.
The Fred W. Muth Co.

Albany, N.Y., Feb. 8.—Honey market dull this extreme cold weather, especially comb, which candies or granulates and cracks easily. We quote: Fancy white, 13@14c; No. 1, 12@13c; mixed, 10@11c; buckwheat, 10@11c. Extracted, better demand: Buckwheat, 6@6½c; white, 6@6½c. Buckwheat most in demand, as the Jewish people will have no other. Beeswax, 30@32c.
H. R. Wright.

San Francisco, Jan. 25.—White comb, 1-lb. sections, 11½@12½c; amber, 9@11c. Extracted white, 6@6½ cents; light amber, 4½@5½c; amber, 3¾@4¼c; dark amber, 3@3½c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

Market is quiet and for other than choice water-white is lacking in firmness. High-grade honey is in light supply, but there is no scarcity of amber stock. Three lots of Hawaiian Island honey, aggregating 523 cases, arrived the current week.

New York, Feb. 8.—The market is decidedly dull on comb honey and very little moving, with plentiful supply. We quote: Fancy white comb, 14c; No. 1, 13c; amber, 11c; dark, 9@10c. Extracted honey is in fair demand, and prices remain about the same. Beeswax steady and in good demand at 29c.
Hildreth & Segelken.

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and guarantee you success if you use
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Incubators and Brooders
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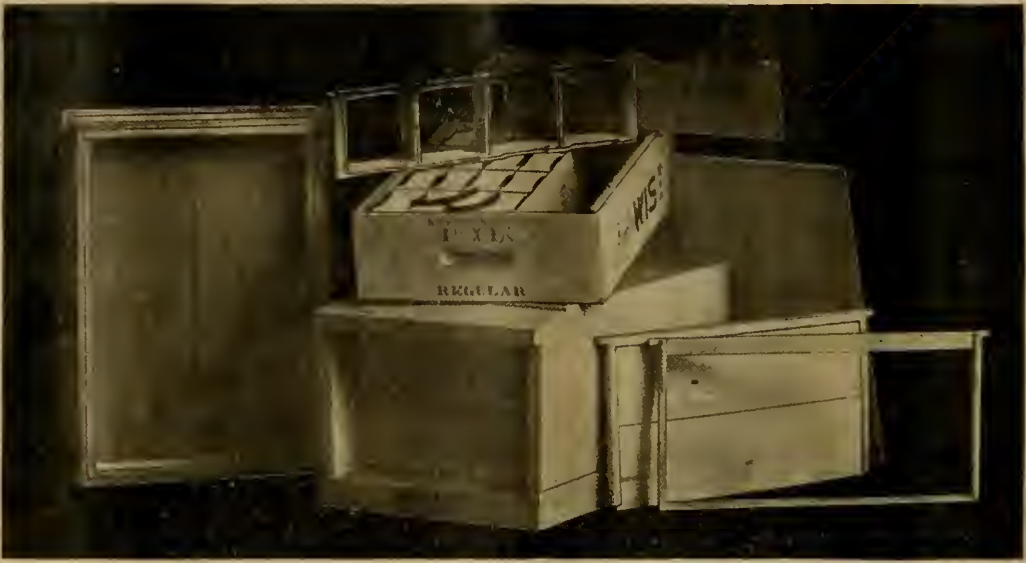
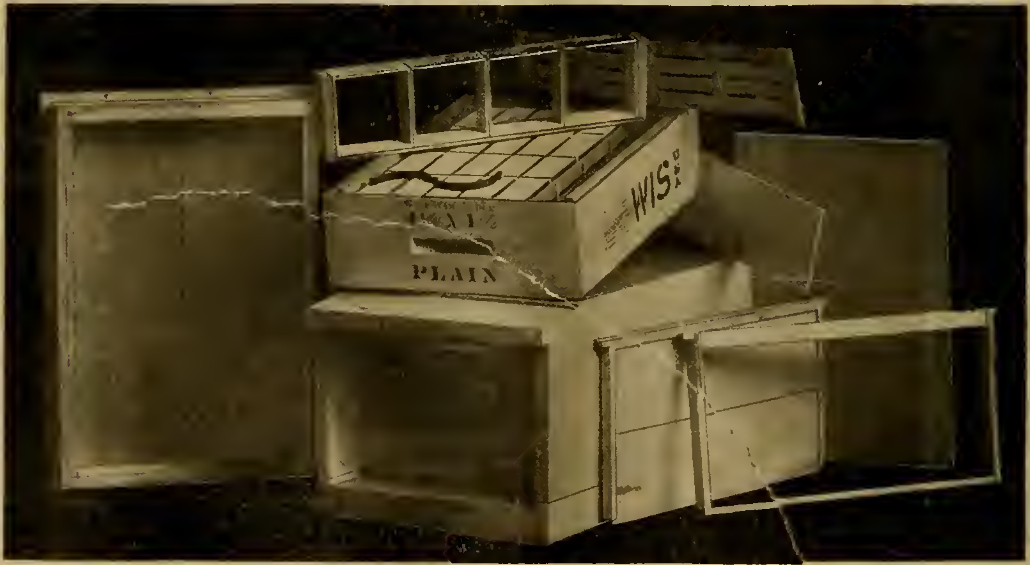
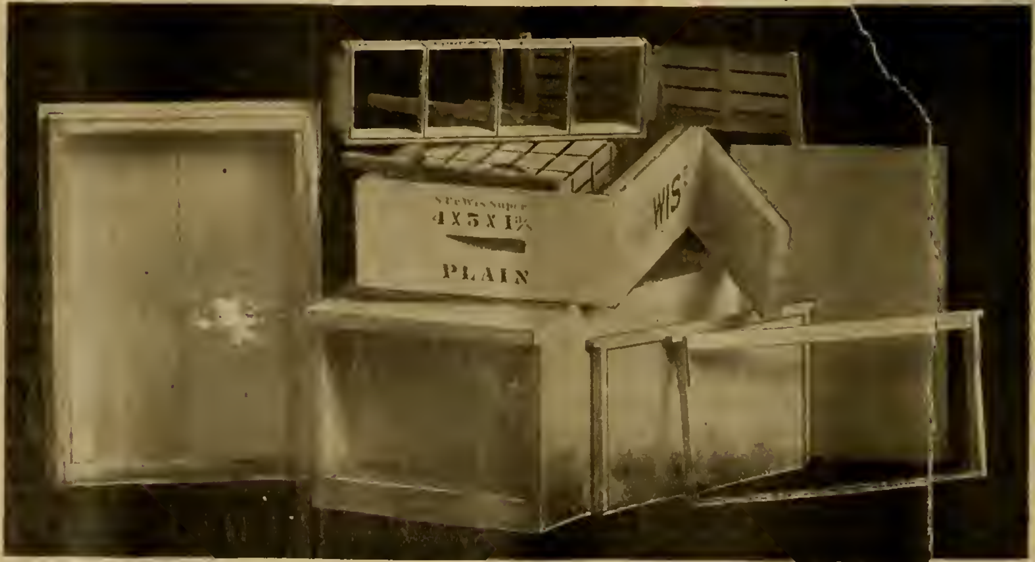


Wisconsin Hive, One and One-Half Story, Regular Super.
Arranged for 4¼x4¼x1⅞ bee-way sections.
The above is our regular one and one-half story Wisconsin style, including one super or section-case of exactly the same inside size and arrangement as the No. 1 dovetailed super.



Wisconsin Hive, One and One-Half Story, 4¼x1½ Plain Super.
Arranged for 4¼x4¼x1½ plain sections.
The above is our regular one and one-half story Wisconsin style, including one super or section-case of exactly the same inside size and arrangement as the No. 2 dovetailed super.



Wisconsin Hive, One and One-Half Story, 4x5x1⅜ Plain Super.
Arranged for 4x5x1⅜ plain sections.
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American Bee Journal

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MASSACHUSETTS AGRICULTURAL COLLEGE

45th Year. CHICAGO, ILL., FEB. 23, 1905. No. 8.

1840 Courtesy Gleanings in Bee Culture. 1903

THE LATE CAPT. J. E. HETHERINGTON.

Correspondence Course in Bee Culture.

Last fall we announced this course and made a special offer to students for early enrollment. We have secured quite a number of students, but nearly every one of these wants to continue his own bee-keeping so that we find ourselves without a sufficient number to recommend to parties wanting help in their yards.

We have inquiries now for help from a number of States—California, Colorado, Florida, Idaho, Illinois, Pennsylvania, Michigan, and other States. See what one of our students says:

The A. I. Root Co., Medina, Ohio. La Costa, Texas, Jan. 28, 1905.

Dear Sirs:—I am very grateful for the 1905 edition of the "A B C of Bee Culture". I am highly pleased with your instructions in your Correspondence Course. It brings out points the amateur could never find by reading bee-books as it gives the essential parts in rotation so to explain them understandingly. It is like having a teacher or trying to study off-hand. Saving so much time and getting the foundation started right is half the battle. I hope to be an expert bee-keeper some day. Should I fail I certainly could not blame you. Everything bearing your name is first-class. May you ever prosper and live long to instruct us. With best wishes, Yours truly, W. R. Hesskew.

Send for our prospectus, or, better still, send us your order with $10.00, for which we will send you:

Complete Course of 17 Lessons.
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1 A B C of Bee Culture.

We give in addition personal answers to as many questions as the student desires to ask, either on bee culture, locations, help, honey markets, or, in fact, any subject relating to bee-keeping. We know where many good locations are yet untouched; where the good honey markets are; who is needing help, and hundreds of other things that the bee-keeper wants to know. We can't tell you these things unless you ask. If you have hesitated to ask us, thinking we could not well afford to give time to answer your questions, enroll in our Correspondence Course. Never mind if you have been a bee-keeper for 20 years. If you do not need the lessons, the information we can give you by mail on a variety of topics will more than pay you. Let us show you one case:

A party became interested in bee-culture a few years ago and set about to build up a large apiary. He succeeded remarkably well, but paid little or no attention to the honey markets, his time being taken up with other matters. The third season he produced a very large crop of honey (150,000 pounds) and being unacquainted with the markets, he sent it for sale to a large city, to a house no more familiar with the honey markets than he. It appears that they sold it at any price they could get, for he told us later that the information we gave him of another market would have saved him over a thousand dollars on the one sale. (He hadn't asked us for it, but learning of the situation we wrote him, but too late; the sale had been made.) Perhaps the American Bee Journal readers think they would not be benefited. We assure you there are dozens of ways in which you can be helped.

Here is what one of our customers thinks of our "A B C of Bee Culture", which is included with the course:

* * *

"After looking through the 1905 'A B C of Bee Culture', just received to-day, I told Mrs. C. I would not take $25.00 for it if I could not get another copy.—P. F. Conklin, Elmira, N. Y."

The New Edition (1905) "A B C of Bee Culture" is $1.20, postpaid, if ordered alone.

* * *

And another customer speaks thus of Gleanings in Bee Culture:

Danville, N. J., Dec. 12, 1904.

Dear Sir:—You ask if I have found "Gleanings" a good investment, and I can truly say the investment has not only been good, but very good. Although I do not keep bees for profit at this writing, but hope to at some future time, will say that I am trying to learn all I can about the subject, and "Gleanings" adds more ideas to my limited store of knowledge than any other publication I receive. All the departments treated in this semi-monthly paper are very interesting to me, and I get anxious to see its pages when the date arrives for its appearance.
Yours truly, Ralph P. Fisher.

Don't you think $10.00 is a small price for what we are offering you?

Gleanings (semi-monthly, 52 pages) is $1.00 per year if ordered alone.

THE A. I. ROOT COMPANY,
MEDINA, OHIO.

ESTABLISHT IN 1861
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GEORGE W. YORK, Editor. CHICAGO, ILL., FEB. 23, 1905. Vol. XLV.—No. 8.

Editorial Notes and Comments

A Capt. Hetherington Memorial Double Number.

That is rather a big heading, but so is this a big number of the American Bee Journal. It contains some very interesting reading matter, not only on the life of Capt. Hetherington, but on a variety of other subjects as well.

Mr. P. H. Elwood, a life-long, intimate friend of Capt. Hetherington, has written a most excellent memorial article, which, with the illustrations used in connection with it, makes it by all odds the best and fullest sketch yet published of the world's most extensive bee-keeper and honey-producer.

It was our privilege to meet Capt. Hetherington at the Buffalo National convention some years ago. We never had a personal acquaintance with him, but we have always felt that it was extremely unfortunate that a verbatim report of his address at that meeting was not taken. If we remember rightly, he told us some very interesting history, especially touching the early work of the lamented Moses Quinby and Rev. L. L. Langstroth, in connection with their bee-keeping.

The brief tributes to Capt. Hetherington, written by others who knew him, will also be read with interest.

For the use of the engravings showing Capt. Hetherington's first and last load of bees, as well as the one showing his damaged sword, and also the one on the first page, we are indebted to Gleanings in Bee Culture. All the others are new ones, made especially for the article in this issue of the American Bee Journal.

Newspaper Facts (?) About Bees.

It seems just a bit strange that to have facts about bees correctly given it is almost an absolute necessity that the one giving the facts must be one having a speaking acquaintance with the busy little creatures. Wm. E. Curtis, a veteran newspaper correspondent, one of the ablest in the world, gives this in the Chicago Record-Herald:

> "Bees and other insects are very important agents in the fruit and flower business. The big yellow and black bumble-bee, as we call it, is almost essential to the production of fruit and flowers. We could scarcely get along without him. Almost all flowers and fruits must be cross-fertilized—that is, pollen must be brought from one to the other in order to produce, and this work is chiefly done by wild and tame bees. As an illustration, the bumble-bee is a native of this country and does not appear in Australia. Down in Australia they had no clover because they had no bees. The bees not only get a great deal of honey from the clover blossoms, but they fertilize them in the act of getting the honey. Hence, as soon as our bees were imported into Australia and set to work in the fields the clover began to grow and has developed there as well as here or any place else", said Mr. Marlatt.

As a matter of fact, orchards would go on just the same if every bumble-bee were dead; at the time of fruit-bloom bumble-bees are too few in number to make any material difference. "Down in Australia they had no clover because they had no bees". "Error i' the bill"; they had clover; they had bees. Several kinds of clover, several kinds of bees. They lacked red clover and bumble-bees. Red clover grew just as well without bumble-bees as with them; but all the seed had to be brought from elsewhere until bumble-bees were present to fertilize the blossoms.

Candying or Crystallizing of Sugar and Honey.

A neat little pamphlet that seems to be issued by the Michigan Bee-Keepers' Association contains this statement:

> "Remember that sugar never candies, it crystallizes, and this fact alone should be sufficient proof of the purity of any honey that is candied solid."

Will the correct use of words justify the statement that sugar never candies? The definition of the verb *candy* in the dictionary begins with the words, "To form into crystals of sugar"; and under the word *candied*, "candied sugar" and "candied honey" are both given as examples. Manifestly it will not do, then, to say that sugar never candies, especially as candy is commonly made of sugar.

But is there not a difference in the appearance of candied honey, as compared with sugar, that may easily be described? Who can put in words just what that difference is?

Disposing of the Honey Crop.

Judging from the reports of the various leading markets, and also from the fact that there seems to be quite a quantity of honey still in the hands of the producers, the question of disposing of the honey crop is just about the liveliest subject now before bee-keepers. It isn't a question of keeping more bees, but how can the one who has just a few bees sell his crop of honey at even a reasonable price?

We believe that in many cases bee-keepers themselves must be their own salesmen, at least until some organization decides to do some combined honey advertising in the daily and other newspaper press of the country. The dear public needs to be informed of the great value of honey as a health-giving food, in the same way as it is told of the various breakfast foods. The demand for honey must be *created first*, then there will be scarcely any trouble to dispose of all that can be produced, we believe.

This is a live, practical, up-to-date subject. What about it?

Shaken Swarms in Australia.

From the Australasian Bee-Keeper it appears that our antipodal friends differ from us in their views and practices with regard to shaking swarms. The editor says:

> "There seems to be some variance of opinion as to what a shaken swarm is. I have always understood it to be a sufficient number of bees and a queen taken from a colony by means of shaking them from the combs, to found another colony."

Chas. U. T. Burke gives his method of procedure as follows:

> "Prepare a hive of empty combs, or frames of foundation, leaving room for two frames, one with eggs just hatching, the other with fresh pollen and honey. Have a young laying queen on hand. Go to one of your strongest colonies, shake fully two-thirds of the bees into a new hive (after finding the queen and placing her aside). Drop your laying queen among them, sprinkle all very slightly with water sweetened with honey, place the hive on a fresh stand; the swarm will go to work in a few days, and in a week will be bringing in a surplus of honey. I have never had a failure this way, nor have I had any swarm out. I always leave the frame of brood with them,

as it encourages the bees to work well, and the queen to lay almost immediately. Do not use much smoke, either in artificial increase or shaken swarms. With the latter I prefer to use none at all, as it appears to confuse them, causes balling of the queen, and sometimes causes the shaken swarm to take flight, and thereby cause much delay."

Two other correspondents give their method of procedure, and all agree in putting the swarm with the queen on a new stand, leaving the brood on the old stand. The difference between that and the common practice here is somewhat radical. The Australian plan divides the colony, putting the swarm on a new stand. The American swarm is left on the old stand. Indeed, it might be said that no swarm is made; the brood is merely taken away, with few or no bees. The Australian swarm, according to Mr. Burke, "will go to work in a few days, and in a week will be bringing in a surplus of honey". The American swarm will go to work immediately, or, rather, will not stop storing. The Australian gathering-force is divided; the American kept together. In a long season may not the divided Australian force do the more gathering? But may not the Australian mother colony swarm again in too many cases?

Is There a Bee-Supply "Combine" or "Trust"?

This question was asked of us just recently. Also, we were requested to name those manufacturers and dealers who are not in the "combine" or "trust".

Not being aware that there is a trust or combine among bee-supply manufacturers and dealers, of course we couldn't possibly say who are in it, or not in it.

While it may be true that the same class or grade of goods is priced the same by more than one dealer, it would not necessarily follow that there is a combination or trust. For instance, a certain style of honey-extractor may be priced exactly the same in the catalogs of several manufacturers and dealers. This might be true, and is true in at least one case, as a certain kind of extractor is made only by one firm, and several others handle the same extractor. So, of course, the price on it would be the same in the catalogs of all the firms handling it.

To readers of the American Bee Journal we would suggest sending for the catalogs of all the best firms advertising in it, and then order from the ones that you believe will give you the best and most satisfactory goods for your money. Of course, you might consider distance, as that would likely influence freight-rates a little.

A good thing to remember is this: Sometimes the cheapest goods at the start are the dearest in the end.

You pays your money and you takes your choice. So runs an old saying.

Miscellaneous News ✣ Items

Mr. F. H. Drexel, one of the leading bee-keepers of western Colorado, called on us a few days ago. His young son was with him. They were on their return journey from Maryland, where they visited Mr. D's old home, which he left some 13 years ago for the great alfalfa honey-fields of Colorado. Mr. Drexel, like some other bee-keepers in hat State, produces honey by the car-load.

* * *

To Missouri Bee-Keepers.—We have received the following letter from R. A. Holekamp, of St. Louis Co., Mo., with the urgent request that it be published at once, so that Missouri bee-keepers can act upon it in time to accomplish the desired object:

The Missouri State Bee-Keepers' Association at its convention last September, passed resolutions to introduce to the State legislature at its present session a Bill for the enactment of a foul brood law and the appointment of an inspector of apiaries.

In both branches of the legislature now in session at Jefferson City, has been introduced a Bill for the appointment by the Missouri State Board of Agriculture of a State inspector of apiaries to aid and assist in the development and protection of the honey industry, and especially for the eradication of an infectious disease known as foul brood.

The Bill has been drawn up with care, and will, when passed, be a great help to the honey-producers of Missouri. So it is of importance that every bee-keeper in this State, who has the welfare of the honey industry at heart, write to the Representative from his county, and Senator from his district, or any other member of our legislature he may be acquainted with, *at once*, urging him to work and vote for the passage of this Bill.

If these letters come in at Jefferson City in large numbers, they will show that the bee-keepers want this Bill passed, and it will also show that the bee-keeping industry of Missouri is of some importance.

There are in Missouri, according to the United States Census of 1900, 41,145 bee-farms, with 205,110 colonies of bees. It produced in the year 1903 over 6,000,000 pounds of honey, which shows that Missouri is one of the great honey-producing States of the Union.

It is necessary that the bee-keepers who will assist in getting the Bill passed shall write the letters to the members of our legislature *without delay*, as the hearing of the committee on the Bill will be before may days.

Let all progressive bee-keepers unite their efforts and work for the passage of this Bill, and thus get the assistance of our State Board of Agriculture in developing the bee-keeping industry, and protecting our apiaries against infectious diseases which are now spreading over the State.

ROBT. A. HOLEKAMP,
Assistant Secretary Missouri State Bee-Keepers' Association.

* * *

The Humming of the Bees.

BY HARRY LATHROP.

There's a deal o' solid comfort—
  Call it nonsense if you please—
In that pleasant homelike music—
  Just the humming of the bees.

Though we sport in winter weather
  With the cold and with the snow;
Though we sit by cosy firesides
  Where the cheerful embers glow,
While we read our books and journals,
  Lay our plans and take our ease,
Still we long to hear the music
  Of the humming of the bees.

When the fragrant apple-blossoms
  Hang in clusters pink and white;
When the plum-trees by the roadside
  Almost dazzle with their light;
When the gentle summer breezes
  Murmur soft among the trees—
It is then we hear the music
  Of the humming of the bees.

Crawford Co., Wis.

H. K. Beecham, of Grand Traverse Co., Mich., called on us last week. He has been a bee-keeper since 1879, and has taken this Journal for the same length of time. He put 64 colonies of bees into winter quarters last fall, from which he harvested about 5000 pounds of honey, mostly extracted. Mr. B. has no trouble to dispose of all his crop either in his home market or near home.

* * *

Our Advertisers, as a class, we believe can not be excelled for reliability and square dealing. We invite our readers to patronize them as generously as are your needs. Please do not fail to mention having seen their advertisements in the American Bee Journal when writing to any of our advertisers. It will help both them and us, and so both they and we will greatly appreciate such mention.

* * *

To Illinois Bee-Keepers.—Secretary Stone, of the Illinois State Bee-Keepers' Association, desires that at least our Illinois subscribers shall read the following:

The secretary of the Illinois State Bee-Keepers' Association gets numerous letters (so many in fact that he can not give them personal answers) like these:

"I keep only a few bees, and it would not pay me to belong to the State and National Associations."

"What are the benefits to be derived from being a member of your Association?"

"I have only a few bees, and I can find a home market for all my honey; there is no foul brood in my part of the State, and I do not need to advertise, so what benefit would I get from belonging to the State and National Associations?"

As secretary of the State Association, and a member of the executive committee, I just want to put a few questions to the men who are the writers of such letters as are quoted above.

Have you ever taken a thought of what the Illinois State Association has been trying to do from year to year ever since its organization, to make it profitable for you to keep your "few colonies" of bees? and to keep out all diseases of bees, that it may be made *possible* for you to keep them?

Have you ever thought of our efforts, combined with those of the National and the bee-papers, to put down the adulterators of honey that have flooded the market, and thus make it possible for you to sell your honey without a suspicion of its being adulterated?

Do you know that we have secured to the State Association a foul brood law the past two years, and have strong promise of one for the

Wintering-Cellar and Apiary of 300 Colonies belonging to John F. Otto, of Calumet County, Wisconsin.

next two years, whereby you can be instructed (free of cost) as to treatment of your bees in case of foul brood?

Do you know that a membership in the National protects you (in the right) from a neighbor who might through envy or otherwise, declare your bees a nuisance? And no charges to you but your membership fee and one-half the costs.

Have you ever thought of the lives of our good men, that are being spent to publish the bee-papers just in the way that will instruct us most? And have you ever begrudged the little dollar a year you gave them for their papers?

We could ply many more questions on these lines, but we do not believe bee-keepers as a class, if they knew it, would hold back the simple fee of $1.00 that gives them membership in both the Associations named, and in that way support the institutions that help to make their interests successful.

Our next Annual Report (the 4th) of about 200 pages, will be out in several weeks, and the larger membership we can show in that the better our prospect, when we go before the Legislature, of a successful appeal being made.

With all kindness to my brother bee-keepers,

I am, sincerely yours, JAS. A. STONE, *Sec.*

✣ Contributed ✣ Special Articles

Comb Honey and Separators—Foul Brood,

BY PROF. A. J. COOK.

I was much interested in the answers to inquiries in the last American Bee Journal. In the production of honey I always took most delight in working for the comb. It always seemed to me that nothing was more beautiful than a perfect specimen of clear white comb-honey. This is specially true when the combs are uniform, smooth and well-filled. I have succeeded many times in securing whole supers where every section was almost perfect, and this without the use of separators at all. I think this usually comes when the colonies are very strong and the harvest is bountiful. The bees seem to rush the honey in to the hive, and if sections are put in either with starters or full sheets of foundation these are carried on together and uneven combs are rarely produced.

I often found, however, quite a different state of things. Some of the combs would be thicker, and there would be a general lack of uniformity. Indeed, this unevenness was so great, or frequent, that in my own experience I decided that it was never wise to strive to get along without the separators. I did not find it mattered much whether these were of wood or tin. While this was true in my own experience, I have known some bee-keepers who are astonishingly successful in securing these almost perfect sections without exception, yet these persons never used separators at all. Thus I was led to say that it was possible to get good sections without separators, but that I found it better to use them. I was much interested to find how many there were who, like myself, found they could not produce satisfactory results without the use of these valuable aids in comb-honey production.

Indeed, I have always considered that the securing of a fine crop of excellent comb-honey, each season, was the best test of skill and proficiency in the art of bee-keeping. Almost anyone can secure extracted honey, and, for the novice, or the one who does not study to attain the best in the art, it is perhaps always wisest to work for extracted honey. The advantages in working for comb honey are: A much more beautiful product—and there is much joy in producing the beautiful; the producing of that which brings a much higher price in the market; and the fact of knowing that we have reached the highest skill of the art. The two handicaps in comb-honey production—I might say three—are, frequent failure, always securing a much less quantity, and the fact that it is much more difficult to ship comb honey.

The California bee-keeper finds this last point one that materially concerns him. He must ship car-loads of his honey for thousands of miles. In case he produces extracted honey, he can do this with no fear of loss or disappointment. This alone will always make extracted honey a favorite with the apiarists on the Pacific Coast. The difficulties in the way and the invariably lessened production makes it imperative that we secure at least double for comb honey that which we might expect for extracted, the quality being the same in each case.

The requisite as I take it, to the best success in the comb-honey production is to have our colonies very strong at the dawn of the season. This may, and often will, require stimulated feeding. I would always have the supers in place at the very commencement of the honey-flow. It is an advantage also if the swarming is past for that season. In case the latter is not true, we can attain the same results by working for very strong colonies. If necessary, we can unite to accomplish this.

PROF. A. J. COOK.

I do not think that any one who works for comb honey can afford to dispense with foundation. I always reach the best success with thin foundation, and while I often use full sheets, I do not find that this is necessary. Neither did I ever find very great advantage in using starters both above and below, in the section.

In case the apiarist produces extracted honey exclusively, there is little to be said except, of course, it is always desirable to keep one's colonies strong and in the very best thrift. I do think, however, that it is generally best not to extract until the bees commence to cap the honey. No one can ever afford to put thin or unripe honey on the market. Such honey is very apt to ferment. It always lacks body, and is always deficient in flavor. It is true, however, that I have produced very excellent extracted honey, which I removed from the combs before it was ripened. But in this case, it was kept for a long time in a warm room, in rather shallow vessels, and thus evaporation continued even after the honey was taken from the comb. The evils arising from marketing unripe honey are so great that no one can ever afford to be guilty of such misdoing.

FOUL-BROOD LAW IN CALIFORNIA.

We are having quite a controversy in two or three counties of California over the matter of bee-inspectors enforcing the foul-brood law. We probably have as excellent a law as any State in the Union. This law makes it the duty of the Supervisors, upon the receipt of a petition of a certain number of bee-keepers, to appoint a foul-brood inspector, whose duty it shall be thoroughly to inspect all the apiaries of his county, and in case foul brood is present to eradicate it. The inspector is well paid, and, as the supervisors have no object to do other than the best for their constituents, competent men have usually been secured.

The difficulty in the matter comes from the fact of our "off years" in this State. The past season there was no honey gathered at all in most localities. Men who are not very well informed regarding foul brood are loth to pay for treatment when they see no chance for gain ahead. The inspector, too, knows how ready bees are to rob from each other when no honey is being gathered; knows also how dangerous it is to work with bees at such times, from the fact that robbing is so likely to be induced, and so is quite likely to decide that he will do nothing at all; and he finds the most of his bee-keeping friends are quite willing that he should desist from treatment. We should remember, however, at such times that the possibility—nay, probability—of robbing brings great danger into any community where there is any foul brood at all in existence.

First, the enforced idleness of the bees makes them ever ready to plunder the other and weaker colonies. The colonies infested with foul brood are almost certain to be weak, and thus we have every condition for the rapid spread of this serious malady. It seems to me it is much the wiser course to eradicate the disease entirely during this let up of the honey-flow. Yet it is certainly true that the foul-brood inspector must exercise very great caution or he will get the bees to robbing, and surely make a bad matter worse. It is, however, perfectly easy and practicable, by spreading a canvas beneath the hive, and surrounding the latter by a good bee-tent, to make all necessary examination with no trouble from bee-stings, no danger of robbing, and no scattering which would otherwise induce robbing and very likely scatter the germs of the fell disease which it is the purpose to destroy. Just two things are necessary: A wise, competent inspector, and most careful manipulation.

Los Angeles Co., Calif.

⁂

Separators Nailed to Wide Frames.

BY G. M. DOOLITTLE.

A correspondent wishes me to give my views on wide frames with separators nailed to them, and closes his letter in these words:

"Is this not as good as anything I can have? And cannot the separators be cleaned of propolis as easily as can wooden separators, even the new fences, as they are called? Please tell us of these matters through the American Bee Journal."

I have used wide frames with separators nailed to them for the past thirty years, and so far I see no reason for changing my surplus arrangement. During this time I have been trying everything that has been advocated as better than the above; but after a careful testing of each and all, I have every time come to the conclusion that, for me, nothing is as good as *tin* separators nailed to wide frames. And, as my honey has always brought as much as, or a cent or two more a pound than, the biggest market quotations, I see no reason why I could secure better prices were I to change my mode of securing surplus.

G. M. DOOLITTLE.

After a careful experimenting all along through these years, I am satisfied that the claim that tin separators have a tendency to less work in the sections, and a decreased yield of section honey, is unfounded. I have used sections without separators and separators of five-sixteenths mesh wire-cloth, so that the cluster of bees would be broken up as little as possible, where separators were used, and at the end of many careful experiments I failed to see any greater production of section honey with either of these, than was obtained with the tin separators. I know that the theory put forth in favor of an unbroken cluster seems reasonable, and from such theory it would appear that a less yield should be the result where separators were used, but the cold facts with me say that all such reasoning is fallacious.

Then, I use wide frames on account of the great advantage they have in that the bees do not have access to the outside of the sections at any point, except the edges of the horizontal pieces above and below the separators, and here there is very little stain or bee-glue used. Hence, when the sections are filled and finished, they are nearly as new and perfect as they were when put on the hive, requiring very little, and often not any, scraping to clean them of propolis or bee-glue, as it is often called by many apiarists. This is no small item, as all of our older bee-keepers know, who have spent days, if not weeks, in cleaning sections so they would be in presentable shape for market.

From the honey obtained from basswood, the sections come out of these wide frames almost as clean in all parts as they were when put on the hive; and no large amount of work is required where the honey is from buckwheat, at which time there is more propolis carried in and daubed about the hive than at any other time of the year.

That this cleaning of sections is no small item will be seen from the many section-cleaners which were invented and advertised a few years ago, many of which are still in use. These find no place with the apiarist who uses properly-constructed wide frames. Yes, more: All the expense required in constructing one of these section-cleaners, or in buying one, is entirely saved by using such wide frames.

More, still: All the time required in using them can be taken for the improvement of the mind in reading, etc.; going to some summer resort and hearing some of the best talent in the world; or, if nothing else seems of more importance, the time saved can be used to go camping or fishing, if one is so inclined; and with me, either or all of these seem to meet my requirements better than spending days and weeks in cleaning sections with a section-cleaner or without one.

As to inventing section-cleaners, I have no discouraging word to say, for in the inventing of anything the mind is improved, and a certain joy comes, which is often greater than any that can be experienced in going fishing, etc. I would not discourage inventive genius in any way, for, when used aright, it is not only a help to the world through the invention, but a help to the world also by making the inventor a greater man or woman, socially and intellectually.

As to the ease of cleaning separators, I am not much interested where tin is used; for, to my knowledge, I have cleaned mine only once, and many of them have been in use for from 25 to 30 years. In using the wood separators in conducting my experiments, I found that the bees daubed them to a much greater extent than they did the tin ones. But this was not my reason for discarding them, but was because they did not answer their purpose as well, when used in connection with wide frames, as did the tin. It is possible that if I were to live in some of the localities of the South and West, I might find reasons that would change my views from the above; but for all sections where white clover, basswood and buckwheat are the chief sources of honey, I firmly believe that there is nothing better to use in securing our section honey than wide frames with tin separators.

Onondaga Co., N. Y.

⁂

Cellar-Wintering of Bees and Its Difficulties.

BY F. GREINER.

In this locality of New York State, wintering bees in the cellar gives us the best results with the least worry. We learned a dear lesson last winter, viz.: It is safer to place bees in their winter quarters early than defer it till December. Even though that nestor, Rev. Dzierzon, has said: "Do not worry about the bees even should it freeze and snow before you put the bees in." About Christmas, he thought, was a good time. The difference in the climate may have something to do with it; perhaps if Dzierzon had such winters to contend with as we here, he might have given other advice.

If I am informed right, the German beekeepers have so far had a mild winter up to Christmas, almost no freezing weather. With such weather it would not matter so much whether the bees were cellared a month later than we practice. The reason why I deem it wise to put in our bees early and before freezing weather is, hives and combs are dry; hives are not frozen down to the hive-stands and may be carried in without disturbing the bees very much. Bees need no cleansing flight during November; they are even loth to improve an opportunity in December, and thus I can see no reason for keeping them outdoors at a risk. Imagine the state of affairs when taking in hives that are icy, the combs freezing cold. You bring them to the cellar into a warmer and humid atmosphere. What will be the effect? The hive and combs would soon be dripping with water, a condition to be avoided by all means. We might wait for a warm spell before we carry the hives in; but supposing that spell does not come, as was the case last winter; what then?

It is quite evident for this climate the best policy is to get the bees in early. Some of our best bee-masters advise not to take all the colonies out at once and put them on hive-stands sufficiently far apart to prevent any mixing up—in other words, scatter them about over the yard. I have never noticed serious results to follow from this mixing up. Particularly with an out-yard far away, this method is not practicable, and I do not hesitate to put the whole bunch out in one night, about April 15. When the bees warm up in the morning, of course, everything that has legs and wings is out. I always try to be on hand as soon as the bees have become quieted down, and close up the entrances to about one inch in width. On a day following—preferably when it is real cool—I clean the bottom-boards or exchange the filthy ones for clean ones. The majority of bottom-boards are usually clean enough.

F. GREINER.

Sometimes it occurs that after putting the bees out on the summer-stands we have a heavy fall of snow, with bright, sunshiny weather to follow. This is unfortunate, for if bees come out under such conditions many will be lost. They become dazed and fly right into the snow where they will die. Something will have to be done at once to keep the bees in the hive as long as is safe without worrying them. Having a great many colonies to see to, it would be impracticable to cover up the snow with sacking, canvas, straw, etc., as may be done in case of a house-apiary, or where but few colonies are kept. The bee-keepers in Germany are sure to do something of that sort, but with us this is out of the question. The best we can do is to bank up our hives with the snow and keep the bees thus confined till the snow has become heavy and wet. In this condition it is not the death-trap that it is when light and dry. A strong and vigorous bee can well rise from heavy snow.

In addition to banking up the hives one might sprinkle ashes, dust, sawdust, or something similar, on top of the snow around the hives to modify its glariness. It is the strong white light from the new snow that blinds the bees; subdued as spoken of, it does not prove so detrimental.

View of Mr. Greiner's Apiary in April, 1904.

The accompanying picture shows the condition of my bees as they were April 21, 1904, myself in the act of kicking the snow against the hives. I hope such a time will not occur again this year; to mention it may prove a help to someone—may save some faithful bees.

Ontario Co., N. Y.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

THE NATIONAL A BENEFICENT ASSOCIATION.

Among Manager France's recommendations I think the most valuable to be this one: "Keep together; compromise; keep out of court." An association that should encourage members to "law it" when they might abstain (and would if they were not members) would be sadly something else than a beneficent association. .Page 9.

ENCOURAGING NATURE STUDY.

How nice that the educational authorities of a great state like Wisconsin should encourage young people—and people not so young—in nature study! How nice that they should help inquiring ignorance by naming books to be read! How nice in them to make bees a separate department of nature! Then, after getting our feelings up thus high, what pathos is this that we wind up in, what tumble from the stars into the mud? No mention of the great and scholarly works of Cowan and Cheshire, Langstroth and the Manual, and A B C, all omitted, and a long list of half-chaffs and out-of-dates named. Verily this is a queer world. Still I suppose the most important thing for us to remember is that it is worse than useless for us to subject that official to sarcasm and contemptuous remarks. Nemesis will overtake him; and *sometime* a more reasonable list will appear. Page 12.

NEW REMEDIES FOR BEE STINGS.

We're always ready to hear of a new remedy for stings (as long as the different substances on earth hold out); but it rather jarred us to have a doctor propose to dope us three hours before we get stung. As the editorial suggests, perhaps it's all right for amateurs not yet inured. Page 19.

TO SEPARATOR OR NOT TO SEPARATOR?

Another example of how the world moves, we have in Question 20. We used to have lots of lively fighting in behalf of separators—sheer waste of good cash—mark of a green operator. Now only 2 out of 26 unqualifiedly advise doing without them—yet one of that forlorn two hints that people that need them are green. Some of the replies are unusally illustrative. Comrade Pettit says: "Some of us used to do it, but the standard is higher now." Also notable is comrade Stone's experience at the Chicago World's Fair. Only a little over 600 pounds out of 2,300 would case without rubbing. Yet I ween some of the combatants of 30 years ago would have described that identical 2,300 pound lot as all right except just a few combs. Page 20.

THE HIVE QUESTION AND SUGGESTIONS.

I licked my lips with anticipation over that new and best hive of Allen Latham's—and, lo, a "long idea" hive adapted to chunk honey only! Still, if you want to post a small out-apiary in June, and never look at it again till at your convenience you take it away in the fall—just getting some honey that would otherwise be lost—and getting it very cheaply so far as expenditure of time is concerned—quite likely there is something in the idea. And it's a scheme a shade different from the ordinary out-yard idea. Worth thinking of in bed some night. Page 21.

"RED CLOVER" BEES AND QUEENS.

Thanks to C. P. Dadant for giving the "red clover" bees and queens a mild cuffing up all 'round. If we really had such a strain of bees it would be all right to recognize them—but then the size of that "if!" And a good laugh over that sample of red clover honey that tasted strongly of *basswood* will do us no harm. Page 22.

EXPERIMENTING IN APICULTURE.

Prof. Scholl is some like behemoth who trusted that he could draw Jordan into his mouth, if he thinks he can do Uncle Sam's census work over after him. But all right—we need just such enterprising spirits to tackle just such big jobs. I believe we have heard before that Texas was at the lead in honey production—that is, years when the California season was bad and her own good. Getting on a semi-desert cattle-range 40 miles from a railroad station for the sake of a good and vacant bee-range, is bidding quite high for it, indeed. Even at that high price it's possible that some determined comrades will bid. Page 25.

Honey as a Health-Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food", written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey". It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey the more honey they will buy.

PRICES, prepaid—Sample copy for a two-cent stamp; 50 copies for 70 cts.; 100 for $1.25 : 250 for $2.25 ; 500 for $4.00 ; or 1000 for $7.50. Your business card printed *free* at the bottom of the front page on all orders for 100 or more copies. Send all orders to the office of the American Bee Journal.

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Some Facts About Honey and Bees.—This is the subject of an article written by Mr. J. E. Johnson, and published on pages 581-82 of the American Bee Journal for Aug. 25, 1904. We have republished it in 4-page leaflet form for general distribution, and furnish it, postpaid, at 35 cents per 100 copies. Send all orders to the office of the American Bee Journal.

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Maple Sugar and the Sugar Bush, by Prof. A. J. Cook ; 44 pages ; price, postpaid, 30 cents. This is by the same author as "The Bee-Keepers' Guide," and is most valuable to all who are interested in the product of our sugar-maples. No one who makes maple sugar or syrup should be without it. Order from the office of the American Bee Journal.

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Why Not send in some new subscriptions for the American Bee Journal? Samples free for the asking.

Capt. J. E. Hetherington: Bee-Keeper, Inventor, and Soldier

Written by P. H. ELWOOD, of New York.

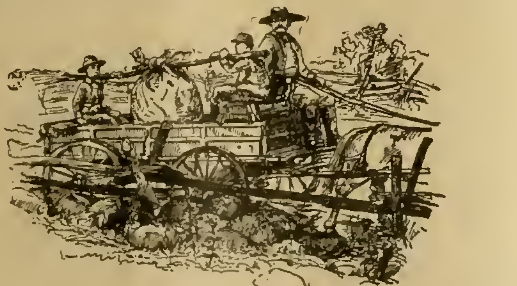
THE subject of this sketch would have gained distinction in any occupation, for he was endowed by Nature with boundless energy and indomitable will-power, coupled with organizing and executive abilities such as would have quickly placed him at the head in any large undertaking. His power of comprehending the whole was no less remarkable than his ability to grasp at the same time the minute details of an extensive business. Had he at maturity engaged in some extensive industrial operation, such as railroad construction, mining, or manufacturing, undoubtedly success would quickly have been his with its attendant wealth; but long before this, while yet in his teens, circumstances and inclination led him into a new and untrodden field—that of making bee-culture a specialty—a separate and successful branch of agriculture.

At this early date there were no bee-books nor bee-papers; no movable-comb hives, no honey extractors, no bee-smokers, no comb foundation—nothing in fact to warrant the average bee-keeper to believe that bee-culture could be made a separate and independent business. Yet Capt. Hetherington believed it could be done, and made it a specialty from the beginning, being first, I think, to depend entirely upon the sale of honey and wax for his livelihood, and the maintenance and upbuilding of the business.

His intimate friend and co-laborer, Moses Quinby, always regarded him as the ablest exponent of modern bee-culture, and as pre-eminently the one to demonstrate to the world that bee-keeping as a business could be made as uniformly successful as any other branch of agriculture. How well he has done this a faithful history of his life should recite, but no one can tell of the time and energy, and money, spent in reaching this result, nor can any one ever fully know of the discouragements that befell him before his efforts were crowned with success.

John Edwin Hetherington was born in Cherry Valley, N. Y., Jan. 7, 1840, and died in the same place Dec. 31, 1903. He came of a good ancestry, his father being an educated English gentleman; his mother a member of the old Judd family of Connecticut. The father dying when the youngest of the three brothers was less than a year old, Master John less than three, the entire care and training of the three children fell upon the mother, and the highest tribute we can pay her is to point to the characters developed in her sons. All three were in the military service during the war for the preservation of the Union, and they came out as they went in, with spotless reputations and characters, and abstainers from the use of tobacco and strong drink—gentlemen in thought, word, and deed.

Capt. Hetherington bought his first colony of bees when 12 years old, with money earned for that purpose. The thorough-going business methods of the mature bee-keeper were foreshadowed in the care taken in bringing home this first colony. The old family horse is put before the large spring wagon, and is driven by a member of the family. For the additional comfort and security of the colony of bees, the hive is suspended in a sheet, the ends of which are tied over a springing pole, while the ends of the pole rest on the shoulders of the two older brothers, who sit facing each other, as shown in the engraving. This extra care seemed necessary for the colony that was destined to contribute so much toward bringing apiculture from the darkness of superstition into the full light of modern science. In contrast to this is given a picture of one of the later loads of 32 colonies. On one side is seen the family residence, while on the other side is the first honey-house and shop, with the barn in the rear. At the back of the well-kept lawn are a couple of wintering-cellars, one of which is shown in another engraving. The bee-yards, spring and fall, are near the cellars, and cover acres of ground. For some years back no bees have been kept at home during the summer months, thus avoiding all annoyances to neighbors.



Capt. Hetherington's First Load of Bees.

Capt. Hetherington's Home, with Last Load of 32 Colonies of Bees.

The boy bee-keeper had good success, and within five years he had marketed honey by the ton, and had secured an average of nearly 60 pounds of honey in glass boxes from his entire apiary. He was a close observer and quick to adopt improvements. Before he had been in the business a half-dozen years he had perfected a double-walled hive with a chamber of confined air between, and had applied for a patent on the same. On thorough trial he discovered that while warmer for a while this double-wall prevented the sun from drying out the moisture, and the hive soon became damp and consequently cold. He made 600 of these, and mechanically they were probably as perfect as hives can be made. Not finding the double-wall satisfactory he next put his bees into straw hives, the last of which were made to take the Quinby size of the Langstroth frame. This was about the time of the commencement of the Civil War. The box straw-hives were excellent for winter and spring, and better suited to the requirements of the bees at other times than the hives previously used. They were not of the usual straw-hive shape, but had flat tops as shown in the picture, and were well adapted to boxing. They cost nearly $2.00 apiece, and at one time he had about 1400 of them.

With the immovable-comb straw-hive he adopted a system of artificial swarming by driving that was so successful that often he had not a single natural swarm from an entire apiary.

Previous to this he had in use swarm-catchers for issuing swarms. These were placed before the old colonies and held the clustered swarms until the apiarist could get around to hive them.

After a trial of the movable frame the Captain found he could not do without it, but in his trial he made the important discovery that the colonies in the straw-hives with the Langstroth frames did not winter or build up in the spring nearly so well as did the others whose combs were built against the sides of the hives, leaving no spaces at the ends of the combs. He therefore adopted the newly-invented Quinby hive, after materially assisting in perfecting the closed-end frames of the same. And after an experience of many years with both open and closed-end frames, he repeatedly assured me that he decidedly preferred the Quinby frame to anything else.

A part of his Virginia bees were put in the Van Deusen metal-cornered self-spacing frames, but those he cared for himself were kept in his own frames.

No new invention ever entered the apicultural world but that Capt. Hetherington noted it, and, if valuable, he adopted it. The honey-extractor was his as soon as it crossed the Ocean, and he used it ever after, believing it to be one of the greatest inventions and one of the most useful articles in the apiary.

He very hopefully followed up the invention of comb foundation from the beginning, and experimented with it four or five years after the date of Wagner's patent, obtaining his samples from a Mr. Steel, of New Jersey. The invention came from Germany, as perhaps did also the samples. It was only a midrib without any attempt at cell-walls, and was a failure, but lacked only Yankee ingenuity to make it a success by giving it side-walls. He was quite enthusiastic at the time of receiving the first handsome sample from the Weiss machine, but, alas! he did not then know that it was made of paraffin, nor did he at first observe that the cells were intermediate in size between worker and drone. The queen was slow to use this size cell except when the foundation was convex or stretched so that the cells were enlarged, when she very freely deposited drone-eggs in them. Noticing this fact, he saw the necessity of making and keeping the cells of proper size. To prevent sagging he tried cloth, paper and wood centers, all of which were objectionable.

Two of Capt. Hetherington's original straw-hives over 40 years old. Wall about 3 inches thick. One at the right is the Langstroth movable-comb, while the other has no frames.

Finally, in 1876, he incorporated fine wires into the wax sheet from which the foundation was made, and met with complete success. Several years before this Mr. Quinby and himself had made a complete comb of very thin tin coated with wax. This was tested in midwinter, Capt. Hetherington bringing bees into a warm room for the purpose, and although the cell-bottoms were flat, it was freely used for rearing brood and storing honey.

In the manufacture of comb foundation it was found that impressing the rhomboidal bases upon the wax sheet would lay bare the wires unless a wasteful quantity of wax was used. To avoid this he left the cell-bottom flat as in the tin comb, thus also economizing in wax and simplifying its manufacture.

Previous to the invention of flat-bottomed foundation he had persistently refused to use natural-base foundation in his honey-boxes, as he was unable to make or buy any that would not leave an objectionable fishbone in the honey, and he did not wish to sell to others what he would not use on his own table, or what would injure the high reputation his honey had gained. With flat-bottomed foundation 12 to 14 feet to the pound, he was able to produce comb honey that, on the average, had a more delicate center than that built wholly by the bees.

In 1888, Mr. Cowan, president of the British Bee-Keepers' Association, and the most illustrious scientific exponent of bee-culture in Great Britain, searched in vain for foundation or fishbone in Capt. Hetherington's honey. The next day he visited a neighboring bee-keeper and found the objectionable hard center in his honey, although he had used no thicker natural-base foundation than 10½ feet to the pound. Certain it is, that until the advent of the so-called "new process" Weed foundation, the flat-bottomed had no rival in the production of fancy comb honey. Capt. Hetherington's patent covers all kinds of wire supports for foundation, whether imbedded in the foundation as made or consisting of supporting wires in wired frames to which the foundation is later attached in various ways, and he should be recognized by the bee-keeping fraternity as the inventor of all wire-supported foundation. This is one of the greatest inventions of modern apiculture. Without it we could hardly use comb foundation in the brood-chamber, or newly-built comb in the extractor. And the flat-bottom wired foundation as used by Capt. Hetherington is probably also the cheapest way in which to use such supports. It substitutes machine-work, which is cheap, for hand-work which is costly and scarce. It saves wax, because being better supported it can be made lighter. It saves brood, since by the usual method of attachment there are hundreds of cells in every hive crossed by bare wires, and other hundreds or thousands of cells so stretched because of insufficient support that the queen does not use them for brood-rearing. The loss yearly from this cause may amount to enough to buy wired foundation. Capt. Hetherington was a skilled mechanic, and until within a few years ago made all of his own supplies, including hives, sections, packing-cases, honey-extractors, box-making machines, etc. Even the three dozen wheelbarrows used in his out-yards were made by himself. The material was usually prepared ready to put together at a mill five miles from home. To this mill he went daily with his men, arriving at daybreak and returning after dark. This, kept up for weeks in the cold winter weather, was indeed a strenuous life, and told heavily on a constitution impaired by army life and disease; but so energetic was he that he would have continued it longer had not the importunities of family and friends prevailed.

His hives, sections, cases, etc., were models of perfection and neatness. His packing-cases were of the whitest basswood he could find in the forest, papered inside, with the sections resting on cross-cleats—the style now so widely advertised as the "no-drip" shipping-case. The editor of Gleanings, in an appreciative article, gives him credit of being not only the originator of this, but also of the tall section and super-spring for holding them in place. He was among the very first to adopt the section-box, and his first were made to contain a comb taller than the brood, and the sections were held in place by the flat super-spring now coming into general use.

In 1874 he made a shipment of comb honey to Great Britain, being the first sent abroad in quantity. At the Centennial in 1876 his exhibit of 3500 pounds of honey in single-comb sections, together with a variety of ornamental packages of honey and wax, was admired by all visitors. The exhibit was built up to represent the turreted front of an old castle, so arranged as to permit the light to pass through in the freest manner, the whole surmounted by the flag under which he fought for three long years. The highest award was given him—a medal and diploma. A like award was given him at the Columbian Exposition at Chicago in 1893. The wording of this diploma by his friend Secor—"For great skill in the apiarian art, and taste in preparing its products for the market, this exhibit is exceptionally complete in every particular"—was very gratifying to Capt. H.

He also received an award on comb honey at the Pan-American Exposition at Buffalo.

For many years past Capt. Hetherington has been recognized as the most extensive bee-keeper in this country. Sixteen years ago Mr. Cowan, editor of the British Bee Journal, after traveling through nearly all bee-keeping countries, wrote that at Cherry Valley, N. Y., he "met the most extensive bee-keeper in the world". That year his colonies numbered 3000, located in 22 out-yards, from 2 to 12 miles from home. The fall of 1903 he went into winter with 2200 colonies, 600 of which were placed in the cellar in one day.

After adopting indoor wintering he moved all of his bees home in the fall and away again in the spring. To avoid this extra work, and for other reasons, he, some years ago (1889), established his Virginia apiaries. The season of 1903 he had more bees there than in this State. The shrinkage in numbers here was owing to the devastations of black brood, which, to quote Capt. Hetherington, "Is twenty times as bad as foul brood". One of the means lately used to fight this disease has been the introduction of Carniolan queens, which, on account of their prolificness, keep up the strength of the colonies even though quite a percentage of the brood dies of the disease. He had previously been well pleased with this race in his Virginia apiaries, where he introduced them for the purpose of carrying on brood-rearing during the usual summer dearth of honey there. Their good disposition and wintering qualities were found as represented, while as gatherers of buckwheat honey they proved to be ahead of the yellow bees.

Perhaps no incident in his life better illustrates certain characteristics of the man than does the establishment of his Virginia apiaries. His brother Oliver, of Michigan, through a friend had become informed as to the bee-keeping resources of the Shenandoah Valley in Virginia, and during a visit to his old home had canvassed with the Captain the advantages of keeping bees where the honey was all white, and where they could be wintered safely unprotected on the summer stands. A few days after the Captain was in Virginia, when he soon concluded this would be a favorable spot to locate the natural increase of his business. And a most prominent characteristic of the man was that after making up his mind to do a thing he did it without delay. His executive abilities were equal to any task in hand.

In this case he resolved to locate a thousand colonies of bees in Virginia in time for the fall flow of honey, which commenced in two weeks. He wired home, ordering lumber for the hives and castings made for the Van Deusen frame-corners, into which he transferred the bees. The hives had to be built complete from lumber in the rough, and given two coats of paint. The bees were in various out-apiaries from 2 to 12 miles from home. These had to be hauled in and transferred, comb and bees, into the new hives (putting 2 colonies together for extra strength), and then a little time given the bees to unite the comb for a thousand-mile journey.

The writer, in ignorance of his undertaking, happened over for a visit when he was in the midst of his preparations. He briefly explained his plans, but when it was proposed that the visit be postponed to a later date, he emphatically refused to entertain the proposal, saying he had nothing to do but oversee his men, and as each had his day's work assigned him, he did not expect much interruption. Twenty-nine men were at work that day. Every man had his place. There was no bustle nor confusion, and everything went off like clock-work. The bees were moved nearly on time, what delay there was being caused by others not in personal touch failing to do their part promptly.

The management of the large number of colonies kept by Capt. Hetherington has necessarily always been in a systematic, wholesale way, to which we may fairly apply the word *extensive* rather than *intensive*. In order that this system of management might apply to all alike, his bees were carefully equalized early in the season. In a good many of the details of his business, however, the word "intensive" might very appropriately be applied, for in the mechanical perfection of his supplies and appliances of all kinds, in the careful looking after the welfare of each individual colony, in the supersedure of old or unworthy queens, and in the neatness and order displayed in every branch of his business, even to the minutest detail, he far surpassed the average keeper of a dozen colonies. So well did he look after the details of his business that it was almost impossible to inquire for any implement or article used or remnant left but that he could tell where it was.

As soon as possible after giving the bees a flight in the spring they were moved to the out-yards, after which they were visited as often as necessary, or about once in nine or ten days during the honey-gathering season, unless special work like queen-rearing required a more frequent visitation. A plot of ground was rented on which to set the bees, and to each yard was moved a small sectional bee-house and a wheelbarrow. No one looked after the occasional swarms issuing, for, as the queens' wings were clipped, such swarms would return.

For some time after adopting the new Quinby hive, he labored with Mr. Quinby to prevent swarming by giving shade, young queens, and plenty of room in surplus and brood apartments of the hive; and in 1868 he succeeded in preventing all increase from the 150 colonies then under experiment. What worked well in one season, however, did not succeed in all, and it was not until he practiced removing the queen that he was entirely successful in controlling swarming. After the advent of black brood it was discovered that removing the queen was also beneficial in checking this disease.

View of Capt. Hetherington's first Wintering-Cellar. The roof covered with a foot of earth and then a board roof. The stones shown are for the new cellar.

More than a score of years ago he adopted the T clamp with the one-pound section. At first his honey was all in glass, but of late years he shipped it unglassed, much in paper cartons.

In the fall the bees were carefully looked over, and all those lacking in bees were rejected. Some seasons as many as one-third were thrown out.

In connection with his last attempts at outdoor wintering, he experimented quite largely with plaster of Paris as a material for bee-hives, it being an excellent non-conductor of heat, and a good absorbent of moisture. He soon discovered that in common with the absorbents heretofore used, in proportion as it became saturated with moisture, it lost its non-conducting properties. He, therefore, after a most thorough trial with almost all kinds of hives, and all kinds of packing material, abandoned outdoor wintering as unsuited to his severe climate, where a five months' confinement to the hive without a flight is occasionally experienced.

Winters like that of 1903-04 would cause disastrous losses. In the high mountainous region in which Cherry Valley is situated, successful wintering has been the most difficult part of bee-keeping, as the honey-bee is indigenous to warmer climates, and when removed to long winters it does not bear confinement well, unless every condition is perfect. Both on account of climate and of the poor quality of the late stores sometimes gathered in this locality, the wintering problem was the last one to be solved by Capt. Hetherington, and the solution of this cost him a mint of money and a score of years.

Capt. Hetherington's new Bee-Cellar. Ventilators are large and open all the time. Also openings in the floors over the bees which are open except in the coldest weather. He believed in abundant ventilation for bees.

For the last dozen years he wintered his bees as well as farmers winter any kind of live stock. A year ago he took out one lot of bees numbering over 800 colonies without finding a dead one.

As for honey, he has for years past been as certain of getting a paying crop as the farmer has been of getting a crop of anything else dependent upon the weather. During his lifetime he produced a greater quantity of honey than any other bee-keeper that ever lived. He found bee-keeping depending upon luck for a passing existence; he left it a specialty founded on the rock of science, the peer of any branch of agriculture. No one ever labored more, no one ever sacrificed more, no one ever accomplished more, toward this result than did Capt. J. E. Hetherington.

Part of Capt. Hetherington's Bee-Yard in the fall, waiting for the cellar.

Captain Hetherington was one of the founders of the Northeastern Bee-Keepers' Association (now the New York State Association), one of the oldest, if not the oldest, organization of its kind in the country; and after the death of Mr. Quinby, its president. He was also present at the organization of the National society, and later elected president. At one time he was associated with Mr. Quinby in giving addresses on bee-keeping before farmers' clubs in some of the towns of central New York. He had a good command of language, and was a clear, forcible writer and speaker, and it is to be regretted that time and inclination did not permit him to make a more frequent use of his gifts in this direction.

Socially, and as a host, he had no superiors and very few equals in the fraternity, and many who read this will testify to the excellent treatment received at the hands of himself and his accomplished wife. His naturally excellent conversational abilities were improved by cultivation. His stock of anecdotes was large, and drawn upon almost wholly as apt illustrations of the various points under discussion, while his army life was so eventful, and his memory so retentive that from this source alone he could entertain and instruct by the hour.

At the camp fires of his G. A. R. Post he was looked upon as chief entertainer, and he was very successful in getting the old veterans to live over again, for a short time, their old army experiences. At a late public gathering of the Masonic Lodge of Cherry Valley, of which he was past-master, he was somewhat unexpectedly called upon to act as toast-master. His remarks on this occasion, the last time he was at a public gathering, were said to have been uncommonly brilliant and eloquent.

The citizens of his historic, native town have long held him in their highest esteem because of his sociability, his high intellectual and moral worth, and particularly because of his splendid military record. Nothing ever came up for the benefit of Cherry Valley but that Capt. Hetherington used his rare executive abilities to help it along. It was he who secured the organization of the Board of Trade in the nick of time to obtain the location of the most helpful industry of the town. He was also foremost in procuring a site for a summer park and recreation ground on the shores of Otsego Lake. And no one labored harder than he for the splendid public water supply of this town—an honor to this small village and a monumental work to those who conceived and carried the project through to completion.

Capt. Hetherington thoroughly enjoyed his home life, while his happy, hopeful, resourceful spirit made him the light of an affectionate household. He leaves a wife, a son, and a daughter. The son, recently married, has inherited his father's stirring activity and much of his executive ability. A younger son died 15 years ago, when a little more than 4 years old.

Capt. H. was an active temperance worker, and for many years a member of the Good Templar order. He was a regular attendant of the Presbyterian Church, of which his wife and daughter are members. He was also an officer and worker in the Sunday-school. He believed in a religion of a practical, working kind that bears immediate fruit, that raises the fallen, feeds the hungry, cares for the sick; and he was a living exponent of that religion, as many persons have testified since his death. At the same time he believed in the Divine side of religion, with duties beyond those to our fellowman, and with privileges and enjoyments and helps not found elsewhere. One of the last quotations he made was from a favorite poem—Tennyson's "Crossing the Bar":

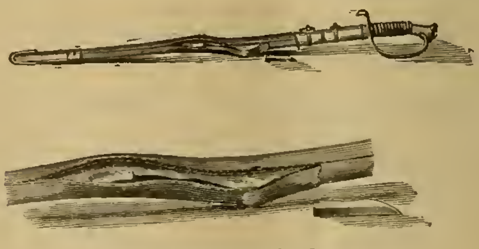
"For tho' from out our bourne of Time and Place
The Flood may bear me far,
I hope to see my Pilot face to face
When I have crost the bar."

Eminent comrades have testified that as a soldier J. E. Hetherington had few equals. It was from no boyish freak, but from a deliberate sense of duty that on Oct. 12, 1861, he enlisted in Company D, 1st Regiment, U. S. Sharpshooters, Col. Berdan commanding. The spare time of the summer before had been spent in target rifle practice, and his mother had made his underclothing previous to enlistment. His bee-business at this time was the most extensive in the land, but it and his life, if necessary, were ready to be sacrificed when his country was in peril. Before the second year had passed, of nine intimate friends from Cherry Valley who had entered the army, four were dead, four discharged for disability, and Capt. Hetherington alone remained in the service. Truly, to quote Gen. Sherman's epigram, "War is hell".

Gen. Sheridan says, "Courage measures the power the mind has over the body". The Captain stood at his post in a most dangerous branch of the service, when most men would have been in the hospital or discharged for disability. His army surgeon has left on record the following to his bravery:

"On May 12, 1864, at Spottsylvania, he became very much exhausted by reason of chronic diarrhea, but declined being relieved from duty; and although wounded in the head, he heroically remained in command of his company." And, again: "On June 22, 1864, in action before Petersburg, Va., he received a serious wound in the hand, which disabled him from duty. At the time of receiving said wound he was suffering from chronic diarrhea, and was so weak and debilitated by it that he was a better subject for the hospital than the battle-field".

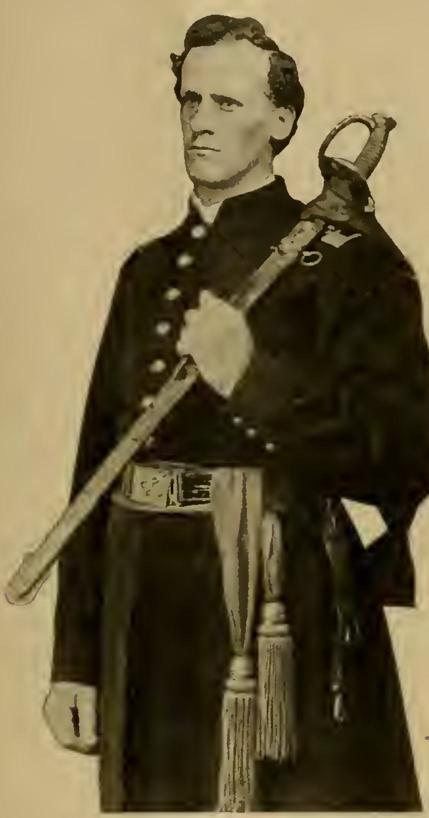
This was the wound he received when his sword was shattered by a bullet, and a piece of the weapon driven through his hand. The engraving shows this piece lying by the broken sword. The portrait shows the position of the sword and hand. He had thrown his rubber blanket across the hilt of his sword, and that over his shoulder. Providentially, the bullet, so accurately directed, found a lodgment in his sword and hand instead of his heart, which lay just beneath. Major Gen. Wilkenson, of the British army, on seeing this sword, said that he had seen many of the heirlooms of prominent British families, and the relics sent home from 20 years of active service, and then added, "Among them all there are none that I consider so fine a personal relic as this broken sword". The Captain threw this away as being of no further use, but it was preserved by his men. He also received a gunshot wound in the shoulder in the second battle of Bull Run, Aug. 29, 1862.



The Sword which saved the Captain's life.

Entering the army a private he came out a captain in that branch of the service where the command of a company meant in some ways as much as the command of a regiment in other parts of the army. The captain of Company D was killed in the battle of Gettysburg, July 3, 1863, and Lieut. J. E Hetherington was recommended for promotion by Col. Berdan from the battle-field. At the close of the

Gettysburg campaign an order was sent to the commanding officers of the army to report to the Secretary of War the names of such officers and men as had distinguished themselves for bravery and meritorious conduct during the campaign. The name of J. E. Hetherington appears in this list, and furnishes the best of proof that his promotion was well earned.



Capt. Hetherington during War Times; the position of hand and sword when struck by the bullet.

Before an engagement, an officer transfers to his darkey or servant all luggage—retaining only his rubber blanket and haversack, for use in case the aforesaid gentleman fails to put in an appearance after the fight. His blanket is made into a small roll and tied at the ends, then carried across his shoulder and breast as a sash is worn. In hot weather this is oppressive; and for temporary relief, although in the midst of a hard fight, the captain had thrown his rubber across the hilt of his sword, and that across his shoulder.

While in the army the Captain was in all the principal battles of the Army of the Potomac, and since, when he joined the Comrades of the Battle-Field, the affidavits of others revealed the fact that he had been under fire 114 days, thus exceeding the requirements of this strictest of strict organizations by 24 days. He was discharged from the service Sept. 20, 1864, by reason of disability from wounds received in action. For two years after it was a question whether he would live, but he gradually regained the larger part of his former vigor. The chronic army disease from which he suffered never fully left him, and at last, after extreme prostration from the grip, ended his life.

In personal appearance the Captain was tall and commanding, and looked every inch a soldier. But for his youth, undoubtedly higher rank and still greater honors had come to him while in the army. Had his health permitted him to remain in the service at the close of the war, and take a West Point course, as was suggested, he could have filled with credit any position in the army. He had resources to meet any emergency; executive ability to carry through any undertaking; will-power that would not be defeated, and a comprehensive mind that grasped the entire situation and strategic points of a battle-field. His description of the battle of Gettysburg clearly showed that, young as he was, he comprehended the situation and movements of the two armies. As a commander he gained the confidence and enthusiastic support of those under him.

The bee-keepers of this country may feel honored that they have had enrolled in their ranks one who as a citizen, bee-keeper, and soldier has contributed so much to the welfare of his fellowman. The world is better for such lives. Good deeds live on forever in continual multiplications, hastening the glad day when all evil shall be overcome by good.

True heart, that beat so brave, and true and strong,
    Then failed him first who never failed his friend;
    True hands, that always could their succor lend
Where Need was born of Want or cruel Wrong;
True lips, that gave the courage of a song
    To fainting souls who would the Right defend,
    Throughout the way until he found its end;
Farewell! And if the way, perchance, be long,
    Unlighted by his loving, genial smile,
    We still may walk it, weary mile on mile,
With surer Faith, and always willing feet,
    Because of heart, and hands, and lips, that went
    So far with us, and such rare presence lent,
And wait, Somewhere, our coming soon to greet.

—A. A. Hopkins.

A Few Tributes to the Memory of Capt. Hetherington.

We wish to give, in addition to what Mr. Elwood has told so well, several appreciations of Capt. Hetherington from personal friends and those who valued his efforts in different lines. One of them, from Maj. Chas. J. Buchanan, was sent to us by Mrs. Hetherington, who accompanied it by the following note:

Mr. George W. York—

Dear Sir:—Among the letters of sympathy I received was one from an army comrade who had been a member of the same Company during the entire time of my husband's service, and with whom there has been a warm friendship ever since—Mr. Charles J. Buchanan, a well-known lawyer of Albany, N. Y. It expresses such a true and just appreciation of my husband's character that I thought you might like to include a portion of it in your memorial number. I send you a copy which you can use at your discretion, or not at all, as you think best. Yours sincerely,

Eva B. Hetherington.

A portion of the letter referred to by Mrs. Hetherington reads as follows:

From Major Chas. J. Buchanan, of New York.

So passes away my most intimate friend and comrade of the Civil War. Our acquaintance commenced in November, 1861, and continued unbroken until his death. He was a soldier by instinct. Manly, courageous, brave and honorable, he easily met and sustained himself through all the vicissitudes of army life. No demand was ever made upon him to which he did not render more than full equivalent. There was a charm and dignity in all that he did.

He was always kind and generous to others, even to the detriment of his own self-interests. His high sense of duty was never lacking in any conviction or emergency. He never demanded of his associates as much as he exacted of himself. His theory and practice were to do just what he believed to be strictly right, always leaving to those with whom he came in contact to act from the same standpoint.

Any one who gained his confidence, was always his intimate.

I always knew, without asking, where he would stand upon any question where the facts involved were undisputed.

He would go out of his way to benefit his surviving comrades, never waiting for his assistance to be solicited.

Take him all in all, he was one of the noblest specimens of manhood that I ever knew. He could, when necessary, reprove as well as commend, but such censure, when he gave it, was to admonish rather than to reproach.

There was no guile in his nature. Frankness and the utmost sincerity characterized his every action. His motives were always pure. His line of conduct through life was marked by that standard of excellence which was born in him, and which he never sullied nor disgraced.

He has gone to his reward, which I doubt not will be commensurate with his aims and ideals in this life.

If he had any motto it was this: "Forward, as occasion offers. Never look around to see whether any shall note it. Be satisfied with success in even the smallest matter, and think that even such a result is no trifle".

Sincerely yours,
CHARLES J. BUCHANAN.

From Mr. L. C. Root, of Connecticut.

MR. GEORGE W. YORK:—A most cheerful and gratifying task is accorded me when I am asked to join in the praises of my good friend, Capt. J. E. Hetherington.

I think I may say that few people outside of his own family knew him better, or had a better opportunity to judge him accurately, than myself. He was intimate from boyhood with the Quinby family, to which my wife belonged.

In writing of Mr. Quinby, Capt. Hetherington said: "I went to him as a mere lad for instruction in bee-keeping".

I first met him at Mr. Quinby's, quite early in the morning after a 16-mile ride. I well remember his enthusiasm at that time. This marked enthusiasm characterized his whole life, whether in business, social, army, religious, or home circles.

His business interests in bee-keeping were probably the largest in the world, and his success was marked, though his life was characterized by generous impulses and deep interest in the higher walks of life. Whatever he did, he did well. Few men have done more accurate and faithful work than he, or shown greater cheerfulness and nobleness of purpose.
L. C. ROOT.

From Prof. A. J. Cook, of California.

It is certainly a pleasure to voice my feeling of esteem and respect for our friend, the late Capt. Hetherington. It was my pleasure to meet Capt. Hetherington at the home of his brother, whom I knew more intimately than I did the Captain, and also at some of our National conventions. A feeling of strong admiration was the result of this all too slight acquaintance. Indeed, I think Capt. Hetherington had many points in common with his brother, who was one of our honored Michigan bee-keepers. These gentlemen seemed to have rare inventive genius. We all know that some of our best implements in bee-culture, especially the honey-knife, owe much to the Hetheringtons. They seemed to have that rare faculty that divines things which as yet have had no existence. It was never my privilege to visit the large apiaries of Capt. Hetherington. I am sure that, could I have done so, I should have seen there what I saw at the Saginaw apiary of his brother, many ingenious helps that I should have carried away to aid me in my own work among the bees.

Another peculiarity of the Hetheringtons was their neatness and method. Like our friend Bingham, they could not abide dirt, which simply means things out of place. No wonder Mr. Bingham and the Hetheringtons were brought together. We all know about "birds of a feather". I am sure that at the large Hetherington apiaries we should have seen system and method supreme. Without doubt this was no mean factor in the success of Capt. Hetherington in the extensive work which he carried on among the bees.

But the best characteristic of Capt. Hetherington, as of every true man, was his courtesy, thoughtfulness of others, and exceeding probity and honor. One had to be with him but a very short time to recognize the fact that he was with a gentleman who valued truth and honor as of highest worth. Such men honor any business or profession. It is very rare that I learn of the death of one whom I knew no more than I knew Capt. Hetherington where I feel such a burden of loss as came with the sad words that our friend had passed into the Beyond. Great souls are none too common in this world, and when they leave us we all—the world itself—are poorer.
A. J. COOK.

Maple Sugar and the Sugar Bush, by Prof. A. J. Cook; 44 pages; price, postpaid, 30 cents. This is by the same author as "The Bee-Keepers' Guide," and is most valuable to all who are interested in the product of our sugar-maples. No one who makes maple sugar or syrup should be without it. Order from the office of the American Bee Journal.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. MILLER, Marengo, Ill.

Location in Virginia or Maryland.

Would Virginia or Maryland be a good location for starting a bee-yard?
WISCONSIN.

ANSWER.—There are good locations in both States, but it will probably need personal investigation to find such locations not already occupied. Sometimes there are bee-keepers in good locations who are willing to sell out, and a short advertisement might reach them.

Size of 10-Frame Hive—Depths of Rabbets.

1. What are the outside dimensions of a 10-frame hive?

2. How deep should the frame rabbets be when one intends to use tin rabbets and the Hoffman frames? I intend to make the hive-bodies and buy the tin rabbets and the frames.
WISCONSIN.

ANSWERS.—1. I think the usual dimensions are 20 inches long, 16 wide, and 9½ deep. That, however, leaves no room for a dummy. If I were making them I should want them ⅝-inch wider, so as to have room for a dummy.

2. Three-quarter inch.

Keeping Bees Near a Lake.

1. Would bees be likely to do well near a large body of water, or would they be likely to fall into the lake?

2. On which side of a lake would you prefer to keep bees—the east or west side?
WISCONSIN.

ANSWERS.—1. The water is not likely to do any harm, only it is just so much surface without any pasturage, just like so much barren land. If the body of water was so narrow that the bees would cross it to get pasturage on the other side, a few bees might be beaten down in crossing by high winds.

2. The side that had the best pasturage.

Prevention of Swarming—Reducing Rearing of Young Bees in Honey-Flow.

1. For the prevention of swarming is there any objection to the use of perforated zinc at the entrance, other than that it hinders the passage of the bees?

2. Is it an advantage or a disadvantage (in a short honey-flow and severe winters) to have the production of young bees reduced to say one frame during the honey-flow (swarming season)?
ONTARIO.

ANSWERS.—1. It makes the hive warmer in hot weather, and imprisons the drones so that they die in the hive unless liberated by the bee-keeper. In some cases it may prevent a young queen from taking her wedding-flight.

2. In the majority of cases it would be a disadvantage.

Races of Bees—Cutting Out Queen-Cells—Wintering.

1. I am sending you a few worker-bees, which I picked up from the front of the hive. Are they Italians, blacks, or hybrids?

2. How do you cut out queen-cells when the supers are on the hives? Do the supers have to be removed every time, and, if so, doesn't this put the bees back with their work?

3. Last fall I put the bees into winter quarters as follows: On top of the frames I put a few strips of wood ¼-inch thick; on top of this a few thicknesses of cloth; on this about 4 inches of leaves, and a dry-goods box over the hive. Today they had a flight, and there seemed to be a good

many bees still in the hive. Last fall the hive and all weighed about 75 pounds. How do you think they will winter?

4. I have a bee-book dated 1887, called "A B C Guide to Bee-Keeping," by W. B. Webster. Did you ever know this man? Illinois.

Answers.—1. When they got here they were of the smashed variety, making it hard to tell much about them. I think one has one yellow band, making it a hybrid. The other may have three yellow bands, and no one can tell whether a single three-banded bee is pure Italian or hybrid. If all in the hive are three-banded, they're Italian.

2. Yes, the supers are lifted off to get into the brood-chamber, and of course that disturbs the work of the bees, but not very much.

3. As far as can be judged from description, they ought to winter well.

4. I knew one bee-keeper by the name of Webster, but I'm not sure he is the man. [It is a book written by a bee-keeper over in England, and has been reprinted in this country. Scarcely any bee-keeper in America would use the implements and fixtures illustrated in it, and, besides, they could not be bought here.—Editor.]

Wintering bees in a basement.

1. How would it do to winter bees in the basement of a brick building where the temperature is 22 degrees above zero when it is 18 below out-of-doors? The air is absolutely pure. The building is 36 x 60 feet. It has a center wall which divides the basement. There is a furnace in one part of it, which is fired up once a week, raising the temperature to 55 degrees above zero. I am wintering 15 colonies of bees in the other part. I put them in Dec. 12, and they are doing nicely so far.

2. Do you think they would winter better out-of-doors? Iowa.

Answers.—1. If the bees have done well up to the last of January, it would seem reasonable to expect still further success. On general principles it would not seem desirable to have a repository range from 22 to 55 degrees, but if it does not touch the lower figure very often, generally ranging in the neighborhood of 45, it may do very well.

2. Likely not.

Increase—Honey-Drinks—Wintering Out-Doors.

1. Which is the more profitable, forced or natural swarming when running for section honey, and when increase is desired?

2. Can a good alcoholic drink be made with honey? If so, how?

3. How much air-space must be allowed to keep the bees from smothering in outside wintering, when the temperature goes as low as 10 degrees below zero? Missouri.

Answers.—1. Depends upon the person; with little experience natural swarming is best; with sufficient experience something else may be better.

2. I've had no experience in that direction, and would rather throw good honey away than to make it into an alcoholic beverage.

3. The entrance should amount to something like two to four square inches, depending upon the strength of the colony.

Best Hive—Detecting Queenlessness.

1. As there are no bee-keepers in this vicinity using patent hives (nothing but the box-hives), I would like your advice as to the kind and size to buy. The main source of honey is white clover.

2. I heard an old bee-keeper say that he could tell when a colony was queenless by the actions of the bees. I asked him how, but he would not tell. Can you tell me? Iowa.

Answers.—1. You will probably be well suited with 10-frame dove-tailed hives. If you are working for comb-honey, 8-frame hives may do better, but even in that case it is better to have 10-frame hives unless you expect to give your bees a good deal of attention. There is much more danger of starvation in winter with the smaller hives, if they do not have close attention.

2. I don't believe there is any way to tell whether colonies are queenless without looking in the hive, although a pretty good guess may be made when a colony is carrying in very little pollen when others are carrying in much. If a colony has just become queenless, you may see the bees running about at the outside in an anxious way.

Drone-Comb Required in a Hive.

How much drone-comb does an 8-frame hive require? California.

Answer.—If you allow no drone-comb whatever, you will probably have all the drones needed, because the bees will manage to get drone-comb into some corners in spite of you. Yet it is better to encourage drones in one or more of your best colonies (not the ones from which you rear queens), suppressing them in others. Mr. Doolittle's plan is good. Allow one or two square inches of drone-comb in each colony whose drones are to be suppressed, so as to prevent them from building drone-comb: then every two or three weeks shave off the heads of the drone-brood.

Improved "Frost-Proof" Hive.

I have been interested in bee-culture for the past two years, and am contemplating increasing considerably my apiary the coming season. This will necessitate the purchasing of additional hives. I have heretofore used only dove-tailed hives, but a gentleman who has invented and applied for patent on a hive is desirous of furnishing me with his product. He makes a hive which is fastened at the corners by a metal device, which he claims to be a great improvement, as the hives can be knocked down at any time; it is frost-proof; and requires no nailing to put together. He also claims he can make them out of basswood instead of pine, as his manner of joining the corners prevents warping.

In your experience have you found that being able to take the hives apart at any time is of importance? and what do you think of adopting this hive? I can see that it is much easier to put together than the dovetailed pattern, but if you can see any reason why it would be unsatisfactory in any way, I do not want to invest to any great extent. Illinois.

Answer.—I know nothing of the particular hive in question except what you say, but on general principles you may feel pretty safe in saying that 9 out of 10, if not 99 out of 100, of supposed improvements are anything but improvements. Just now I cannot think of any advantage there would be under ordinary circumstances in having a hive capable of being taken apart. The only advantage I can think of in any case would be to take the hives apart so as to pack them in less space, but that would apply only to unoccupied hives. The corners of a basswood hive may be held against warping, but would that prevent shrinking and swelling, so as to keep the brood-chamber always of the same depth? A "frost-proof hive" in northern Illinois sounds like a fairy tale.

Stimulative Brood-Rearing—Feeding Bees—Leasing Ground for an Apiary.

1. What is the most satisfactory way of stimulating brood-rearing in the spring?

2. Is not extracted honey and sugar syrup mixed the best feed when it is fed warm?

3. What should be the proportions?

4. In feeding is it not better to have all the hive-bottoms perfectly tight, and raise the front somewhat higher than the back end, pouring the syrup in at the entrance?

5. Can you give a form of agreement in regard to leasing ground for locating an apiary?

6. Should the land-owner be bound to protect the apiary from thieves and stock so far as he is able to do so? West Virginia.

Answers.—1. The most satisfactory way for me is to see that the bees have plenty, yes, more than plenty—abundance—of stores, keep them well closed up, and then let them entirely alone. If your queens are not so good at laying as to do their best without the lash, or if your locality is such that you have good flying weather without any pasturage, then it may pay you to feed half a pound of diluted honey every other evening, or to change end for end the outside comb on each side.

2. It is not so good as solid combs of sealed honey.

3. It's like the rule for the proportion of oats and sawdust for good horse-feed—the less sawdust the better. In many cases, however, sugar syrup must be fed when honey enough is not to be had, and then one-fifth honey is better than pure sugar. Sugar alone does better for a winter than for a spring feed.

4. I have fed many a colony in that way, and it worked well, only for some reason that I did not understand quite a few dead bees were carried out next morning.

5. I'm not a lawyer, but I should think all that would be necessary would be a writing saying that such a piece of ground was to be leased for such a time for such a consideration.

6. Not unless it was so specifically agreed, in which case the consideration should be correspondingly greater.

Best Foundation to Use.

What kind of foundation is better to use for brood, light or medium? Also what kind is better in supers for extracting? Which is the better cell, the round or hexagonal?
CANADA.

ANSWER.—It matters little which kind of cell, or whether light or medium for either brood or extracting frames, only the light foundation needs to be better supported than the medium.

Bees Noisy in the Cellar.

It is 64 days since my 21 colonies were put into the cellar, some of them nuclei and some real strong. The room is 12 x 14 x 5 feet deep, 3 feet under and 2 above. I have a furnace in the cellar, but there is a double-wall partition between the bees and the furnace, and the temperature is always at about 45 degrees. The cellar is dry, cool and sweet, with good outside ventilation when required, and a chimney runs from the cellar up.

Three of the strong colonies are always more or less noisy, and I do not understand why. Each hive is raised one inch from the bottom-board, and has a cushion on top. At one time I let the cold air in and the temperature went down to 32 degrees, then it gradually went up to 55, and finally down to 45. I let them alone for days at a time, thinking they would quiet down, but that same noise is always heard more or less, while the others are very quiet. The entrances are not spotted, and so far only a few bees have died.

Would it be better to take them out and leave them out when the weather is warm enough? ILLINOIS.

ANSWER.—It is not easy to understand just how much noise those bees make. It is possible that they are dangerously noisy, and it is possible that the noise they are making may be safely kept up all winter. The strongest colonies may be expected to make more noise than the others. It might do better to take them out and leave them out, but likely not. You might try giving them still more ventilation below, or a very little above.

Italianizing Bees.

I have 11 colonies of black bees. I wish to increase as much as I can this year, and would also like to Italianize, or change to better stock. At the same time I wish to interfere as little as possible with the honey crop, which comes here in June, July and August. I notice on page 225 of "A B C of Bee Culture" a plan which says to purchase a choice breeding queen in the spring or summer, not to remove the old queens until the summer crop of honey is stored, and instead of natural swarming take frames and make nuclei, giving them queen-cells from Italian brood.

Where will I get the queen-cells? Is it not possible that the Italian colony will not have any queen-cells in it at the time I want them? Would it be necessary for me to make the Italian colony queenless at about this time? TEXAS.

ANSWER.—You cannot be certain there will be queen-cells in your Italian colony when you want them, but you can make it more likely by giving occasionally a frame of brood from other colonies to your colony with the choice queen. Thus building it up strong you will be likely to have queen-cells early enough. But to make sure of them, look through the hive about 10 days before you want to use the ripe cells, and if you find no cells started you must make the colony queenless. Take out the queen with 2 frames of brood and adhering bees, and put them in an empty hive on a new stand, adding from some other colony a frame or two of honey, and filling up the hive with frames filled with worker foundation. A week later let the 2 hives swap places, for by that time the cells will be sealed, and the nucleus with the old queen being put on the old stand will get all the flying force. You can cut out and use the cells 9 or 10 days from the time the old colony was made queenless.

"Good" Candy Made with Granulated Sugar.

I have made some "Good" candy, using granulated sugar. After I had it made I noticed that the recipe called for pulverized sugar. I have no way of pulverizing the sugar. Will it make good feed as it is? ILLINOIS.

ANSWER.—The granulated sugar will make good feed, only it will be rather extravagant, for the bees will be likely to throw out the coarse grains. I don't know of any way to pulverize granulated sugar, unless to borrow the druggist's mortar and pestle; but you ought to have no trouble in getting pulverized sugar from your grocer.

Shaken Swarms—Rearing Queens.

I started last spring with one colony. It cast a fine swarm, but as I do not have time to watch them during swarming time, I did not see it come off. It was leaving an appletree when I saw it, and in spite of all I could do to save it, it went off to the woods. I bought 3 colonies last summer, so I have 4 in the cellar at present.

I would like to make 8 colonies out of the 4 this coming season, and get as much surplus honey as I can, besides. My bees are blacks, and I want to Italianize at least 2 colonies. As I have not time to watch them and they are not situated very close to the house, if I allow them to swarm naturally I will be likely to lose them, so I have been trying to plan some suitable method of artificial swarming. The bees are in movable-frame hives, but owing to crooked combs and brace-combs, they are practically immovable. So it would be almost impossible, especially for an inexperienced bee-keeper, to find the queen to clip her wings, or in case of Italianizing to destroy the old queen before introducing the new. I have read considerable during the past year, in bee-books and bee-papers, about shaken swarms, and from the methods given have been trying to arrange one to suit my case. I will outline it and ask your advice as to its suitability or practicability.

I thought to purchase four 10-frame, 2-story Langstroth hives (for extracted honey), with Hoffman frames, and fill them with full sheets of foundation in both stories. Order 2 Italian queens in time to have them about the first of the honey-flow from white clover, as it is about the first that yields any surplus. Then when honey is coming in freely, put the new hive with full sheets of foundation and an entrance-guard to prevent the queen and drones from going in, on the old stand; shake all the bees but a few to care for the brood in front of the new hive, and let them run in; catch the old queen at the entrance-guard, and put her back in the old hive, removing it to a new stand. Give the new colony an Italian queen. I would have to give the 2 new colonies for which I have no Italian queen, the old queen, and let the old colony rear a queen for itself.

A neighbor bee-keeper who has had considerable experience, and to whom I was telling my plan, thought it would work all right, and said a good way to get the bees out of the old hive was to place an empty super on top, smoke the bees good, then drum on the sides of the hive from 10 to 15 minutes, when all the bees would go up into the empty super, and could then be shaken in front of the new hive.

1. Do you think the plan would work all right?

2. Would I need to wait until the bees were preparing queen-cells for swarming to shake them, or would it be all right to do it as soon as there is a good honey-flow coming

in? (It would be hard for me to find queen-cells without removing the frames.)

3. Would you put the cage with the Italian queen in the new hive before letting the bees run in or immediately after?

4. If worker foundation in full sheets is given will the bees rear any drones?

5. What grade of foundation should be used in the brood-chamber? In the upper story for extracted honey?

6. Would colonies shaken in this way be likely to swarm again?

7. Are queens that are reared by the bees after their old queen is removed (when this has been done previous to the forming of queen-cells) likely to be all right? Are they as good as those reared under the swarming impulse?

8. If so, would it be all right after a colony is properly Italianized, to remove the old queen and give it to a queenless colony, and let the then queenless one rear a new queen?

9. If this will not work, will you please give me a simple method by which an inexperienced bee-keeper could rear queens from an Italian colony to supply any colonies which may be left queenless, or to improve his stock?

CANADIAN.

ANSWERS.—1. Yes, with some modifications mentioned in following answers:

2. You can shake, without waiting for queen-cells, as soon as colonies are *strong enough* in a good honey-flow.

3. I wouldn't put her in the new hive, but in the old one. Her reception will be more kindly, and the broodless bees will be much better satisfied with their old queen.

4. They will be likely to build a few drone-cells in odd corners, and of course rear a few drones.

5. Medium brood, unless you support the light brood well.

6. Not likely.

7. Yes and no. As you propose to manage, I wouldn't expect the best of queens.

8 and 9. Your colonies, in the way you propose, wouldn't be strong enough, and having no field-workers would he in too discouraged a condition. You will be all right if you take the queen (with perhaps one or two frames of brood and bees) from a strong colony with its full working force at a time when honey is yielding well.

Feeding Bees in Winter—Punic Bees.

New Hampshire lost most of her bees last winter. My 9 colonies died on the summer stands.

I bought a new supply last spring, and put 7 colonies in the cellar the first of January, this year, having waited in vain for 6 weeks to give them another flight. My cellar is not a good one for bees. The temperature is 35, and it is sometimes wet in the spring or during prolonged thaws in the winter.

Several of the colonies are small in numbers, and all are deficient in stores. They are in two-story dovetailed hives, the upper story empty, and inch blocks under the front corners of the hives.

I commenced feeding "Good" candy a week ago, giving each colony a piece about the size of an orange. Today I cleaned out about a half-pint of dead bees, on an average, from each hive, and found on the bottom-board under each ball of candy as much powdered sugar as it took to make the candy.

1. Was the candy too sugary?

2. A neighbor of mine who is an old bee-keeper, says he has successfully fed bees in winter with thick syrup, in fruit-jars covered with thin cloth and inverted over the cluster. Is it safe to try this plan if the candy won't work?

3. Ought I to cover the frames with a chaff cushion?

4. Will it be better to put them out early in the spring to feed them, or wait until the maple blooms appear?

5. There is a continual hum in the hives, sometimes sufficient to be heard across the cellar. Is this too much noise to call it good behavior, and, if so, what is the cause and remedy?

6. Have the Punic bees proved a success in this country, or are they still an experiment?

NEW HAMPSHIRE.

ANSWERS.—1. Probably. Perhaps not as thoroughly kneaded as it should have been, and perhaps *too fresh*. You will generally find directions to let it stand some time after being made. That gives time for the sugar to be dissolved by the honey, and if that time is not allowed it may be sugary. There is, however, little loss in the case, for you can collect the dry sugar that the bees have thrown down and use it over again, either now or in the form of syrup in the spring. Possibly you might succeed better to make common boiled candy, merely boiling sugar in a little water till it will be hard when dropped in cold water.

2. Yes, if the candy won't work, but it will work. I commend to your reading the article on page 86, by that very practical and common-sense bee-keeper, C. P. Dadant.

3. It will be better. Or, it may be more convenient to use pieces of old quilts, carpets, or something of the kind.

4. Somewhere from the middle of February till the middle of March it may do to take them out for a flight on a warm day, and then take them back in the cellar till after maple-bloom. Sometimes maples get in too much of a hurry, and it's better for the bees to stay where it's warmer, even if the maples are fools enough to start blooming only to be frozen up again.

5. Less noise would probably be better; but as cold as 35 degrees they will make a good deal of noise to keep themselves warm. Can't you warm up the cellar in some way? Even if only occasionally to 45° or more, it would help. Hot stones or jugs of hot water *tightly corked* might do it.

6. In the experimental stage; reports varying from favorable to extremely unfavorable.

Colony with an Imported Queen.

Last May (1904) I received by express a 3-frame nucleus containing the highest grade (according to price) imported Italian queen. The nucleus was given a 10-frame Danzenbaker hive, 7 frames containing foundation in full sheets. The nucleus did not build up quite as rapidly as I had hoped, but by the end of October, by dint of spreading brood and feeding sugar-water, it had grown to a fair-sized colony having 20 frames (double brood-chamber) of honey and brood. I turned a Danzenbaker cover over the hive, simply a thin ⅜-inch box, reaching a couple of inches below the top brood-chamber. I left the entrance 1x14 inches open, except for wire screen to keep out mice and robbers. The colony seemed to be wintering well, very well indeed. On occasional flight-days they came out actively, and there were never but a few dead bees on the bottom-board or in front of the hive. Dec. 8 and 31 bees were out in good force for play-spells, and Dec. 21 a few were out. Jan. 1, 1905, the temperature was 54 degrees in the shade, all the bees were out, and robbing began. (I have 7 colonies, one a weak one which I had carelessly left with the wire guard off.) Jan. 2 there was a snowstorm. Jan. 19 the temperature was only 38 degrees in the shade, but the sun was very much warmer for a short while, and the bees from the 3 south colonies (they are in pairs) came out in surprising force, also some bees from the hive containing the queen mentioned. At no time this winter has the temperature here in the daytime been to zero. But a few nights before the last-mentioned play-spell the temperature for a brief period was 6 degrees below zero.

On the morning of their last play-spell, previous to their coming out, I gently pulled out with a small stick, the dead bees that were on the bottom-boards of the 4 Danzenbaker hives. The 3 other hives are old-style with very small entrances. In the hive containing the queen mentioned only a few bees were on the bottom-board, a dozen or two at most. But all alone about the middle lay the queen herself. She was easy to identify as the same queen, because of her wing which I clipped last May. As she was not dried up, her death must have been quite recent. On the hive next to this one I had used a small entrance for protection. I pulled a load of dead bees out of it, and left a large entrance, as the other 2 Danzenbaker hives with wide-open entrances showed as few dead bees on the bottom-boards as the one with the queen did.

1. Since the other 2 wide-open entrance hives (which also faced the west wind) and the queen's hive (which faced east and has a building at its back) seemed to have a few dead bees, while the one Danzenbaker hive with the small entrance, about ⅜ x 8, was loaded with dead bees, is it likely that the imported queen perished from that cold-spell mentioned?

2. In a cold-spell wouldn't any queen be near the center of the cluster, and be among the first to die?

3. In case of starvation isn't the queen one of the last to die?

4. Is it possible that the mild winter has led to unseasonable brood-rearing and egg-laying, and undue tax on the queen?

5. In that case would the fact of considerable part of the stores being non-nitrogenous sugar-water work destruction to the queen or not?

6. Do bees ever supersede a queen in winter? If so, how could they rear a new queen without her being an unfertilized drone-layer?

7. Would you think it at all likely that they superseded last September, but left the original queen on the combs, as sometimes happens (so I have read) till she died naturally?

8. Would you be inclined to think that that hive has no queen?

9. Assuming it is not destroyed by robbing, how early next spring, if winter continues mild, will that colony cease to exist, or at least fall below the point of easy building up?

10. Is it possible to introduce a queen in winter in an outdoor hive? If so, how?

11. I notice in bee-papers one Southern queen-breeder advertises, "I can send you a queen any month in the year and guarantee safe arrival." And another, "Queens from now until Feb. 1, $— each." Would it be advisable to attempt to secure a new queen now, or do these advertisers mean these offers only for their Southern customers?

12. If you had this colony what line of action would you pursue to make the best of the matter for the coming season?

INDIANA.

ANSWERS.—1. No. 2. Yes. 3. Yes.

4. Even if the queen should lay several times as much as usual in winter, it would still be a small amount compared with her full capacity, and would not be likely to have any appreciable effect on her health and strength.

5. The lack of nitrogenous food would have for one effect to save the queen from laying, and it couldn't kill the queen without killing the other bees.

6. Probably not. I don't know for certain just what would be the result in all cases if a queen were killed in winter. If at a time when brood was present they might rear a queen, and it is among the possibilities that she might be fertilized as soon as drones were flying; but it is not likely that such a queen would be valuable.

7. It is entirely possible. It is also possible that she was killed on the occasion of the robbing mentioned.

8. The probabilities are in that direction, but you can't be sure until you find no brood in spring when all other colonies have brood well under way.

9. Not till in honey harvest if laying was kept up well in the fall.

10 and 11. Yes, you can introduce in winter the same way as in summer, but it is hardly advisable. It would disturb the colony unnecessarily, and there would be no particular gain. Even with guaranteed arrival, she might not arrive in as good condition as later.

12. I'm not sure whether it's worth while to tell you what *I* would do, for bee-keepers who have been no longer in the business than you have are almost certain to think it of more importance to have a large number of hives with bees in than to have a large number of bees in each hive. The chances are 99 in 100 that I would break up the colony when spring opened—of course on the supposition that it is queenless or has a worthless queen—distributing combs and bees to colonies that would be the better for strengthening. That would leave all in shape so that by fall I'd have more good colonies than if I had coaxed along the queenless one. But you'll hardly be willing to break up that colony, and you can keep gradually adding brood from other colonies and buy a queen to introduce near the opening of the honey harvest. But if you can steel yourself to be so hard-hearted, you'd better break up a colony that is queenless in the spring.

A Queen-Bee Free as a Premium.—We are now booking orders for untested Italian queens to be delivered in May or June. This is the premium offer: To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us one new subscription with $1.00 for the Bee Journal a year. Now is a good time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.

Convention Proceedings

ONTARIO BEE-KEEPERS' CONVENTION.

REPORTED BY MORLEY PETTIT.

(Continued from page 119.)

The Question Drawer was reversed from the usual order. The president chose a subject, subdivided it, and asked the members leading questions.

PRODUCING COMB HONEY.

1. What race of bees would you choose for producing comb honey?

R. F. Holtermann would choose Carniolans, if it were not for their tendency to swarm. They are hardy, build up well in spring, cap white, use little propolis; in fact, seem to have only one fault; but on that account, in a locality where the flow is continuous, and inducement to swarm great, they must be strongly mixed with Italian blood.

Jacob Alpaugh—A cross between Italians and blacks produces good comb honey. Blacks cap whiter but do not store so well. There is a great difference in Italian bees.

WHAT SIZED HIVE WOULD YOU USE?

Morley Pettit prefers the 10-frame Langstroth.

F. J. Miller considers the Heddon hive excellent for either comb or extracted honey.

Jno. Fixter for five years got more honey from a 10-frame than from either the 8-frame or 12-frame hive.

Mr. Sibbald said last year if the hive is too large put in a division-board and run the hive at the capacity it has at the beginning of the flow.

R. H. Smith—How about uniting at the beginning of the honey-flow?

Mr. Holtermann—I do not care for uniting at any time.

Morley Pettit—The main thing is to equalize brood. This can be done by taking from the strong and giving to the weak. It should be capped brood, and not more than one or two combs at a time from any hive.

TIME OF PUTTING ON SUPERS.

Mr. Alpaugh—I would make sure to have supers on in plenty of time. I do not find the bees do the foundation any harm before the season. It is after the honey-flow is over that they gnaw and wax it.

R. H. Smith—I would not put on supers until the bees are ready to work in them. If you have a super drawn out from last year, put that on first; but be sure last year's honey is extracted out of it. A good way to get well-filled sections is to put on extracting supers until the bees swarm, then put sections on the swarm. But sometimes the season is half over and not nearly so much comb is obtained.

Mr. Holtermann—We must consider the most paying system. To wait until the bees swarm may give the best quality, but the quantity is so much less that the money returns are entailed. In any case, sections must not be put on until the end of the dark honey flow. Where a raspberry honey counts, the honey from it often runs on into the white clover season and injures quality considerably.

SECTION FOUNDATION, AND HOW PUT IN?

How much foundation would you use in a section? And how would you put it in?

The consensus of opinion was that the section should be *filled* with foundation.

R. H. Smith said it should fit the sides and bottom to 1-16 inch.

F. J. Miller fastens foundation with a hot-plate machine, and uses a bottom-starter.

H. G. Sibbald, whose comb honey took first prize at the Honey Show, uses what he calls an old-fashioned method. He puts the section together, puts the foundation in, and runs melted wax around, fastening it on all four sides.

Mr. Holtermann—You cannot get good sections without full-fitting foundation. Too many supply dealers turn out narrow foundation which does not fit the sections. That made by the Weed process does not sag and can be put in to fit.

Morley Pettit—If foundation is *hung the strong way* in the sections it will not sag. By the "strong way" I mean with ridges running up and down instead of horizontally. With strong foundation put in this way there is no occasion for using bottom-starters.

WHAT STYLE OF SEPARATOR.

Morley Pettit—The best separator I have used is rather expensive. It is bored full of ¼-inch holes, so the bees pass freely through it. It is important to allow the bees to go through the separators, but slatted separators give a wash-board appearance to the comb.

Mr. Alpaugh—I do not see the need of separators.

Mr. Holtermann—The best separtor known was invented by Mr. Bettsinger, of New York State. It is made of wire cloth with a quarter-inch mesh.

HIVING SWARMS.

Do you hive swarms on starters, full foundation or combs?

Use a contracted brood-nest with starters and one comb. Mr. Hall said this comb should contain young brood to make the hive more home-like.

R. H. Smith—Use 2-inch starters. They give less pollen in the sections than narrow starters.

PUTTING SECTIONS ON SWARMS.

Do you put sections on the swarms as soon as they are hived?

Mr. Hall—Put them on at once.

Morley Pettit—If the swarm is inclined to be restless at first, do not put the dummies in the brood-chamber for a few days.

REMOVING SECTION-SUPERS FROM HIVES.

In taking off sections do you use a bee-escape, or how?

Mr. Hall—During the honey-flow, when no robbers are about, set the supers on the ground and the bees fly home. After the honey-flow use escapes.

Mr. Holtermann recommended a cloth soaked in carbolic acid solution. Insects abhor this acid and the smell from the cloth spread over the super will drive them down and out.

The evening of Nov. 15, the Fruit-Growers, the Bee-Keepers, and the Horticultural Associations held a mass meeting in Association Hall, at which Mayor Urquart, of Toronto, officially welcomed the numerous delegates to the city. Honorable Jno. Dryden, the Ontario Minister of Agriculture, was chairman of the meeting. Dr. Jas. Fletcher, of the Central Experimental Farm, Ottawa, addressed the meeting on

"WHAT THE LITTLE BEE IS DOING."

In his remarks the Doctor called attention to the interdependence of all things in nature, as illustrated by the community of interest between the fruit-men and the bee-keepers. The little bee is doing much more than it is given credit for, and not some things that it is supposed to be doing. There is much to be learned from the life of the bee. The fact that bees are so common is assurance that more should be known about them. Things common to us should be best known. The scheme of Nature is to make things perfect. One of her plans is to fertilize flowers, and to do this two sets of organs are developed, one for the production of fruit or seed, and another for protection and fertilization. And because Nature abhors self-fertilization she provides means by which her scheme may be carried out. This plan insures uniformity of type in all the productions of Nature. One of the most active agents in the carrying out of this scheme of Nature is the bee. In return for this service the flowers of Canada provide the best nectar and honey that can be obtained in any part of the world, at the time when they require the service of bees.

One of the best things for the bee-keepers is the assertion made a few years ago by fruit-men, that bees punctured fruit. This sensational libel upon the bee set people to studying more closely than before, with the result that bees are better known. People are now better aware that the bee and the wasp are not close relatives. Bees have a business-like way of going from flower to flower of the same kind, not from one variety of flower to another. This insures a uniform quality of honey and an economical distribution of pollen.

Peculiar as it may seem, bees gather honey from flowers most extensively just at the time when flowers are most in need of having pollen distributed. The flowers in their turn change their color after fertilization, so that the bee knows it is no longer in need of visitation.

In some parts fruit-growers are finding it to their advantage to keep bees in their orchards, simply for the assistance the bees give in the perfecting of fruit.

SECOND DAY—Wednesday Morning Session.

Prof. F. C. Harrison, of the Ontario Agricultural College at Guelph, addressed the convention. He congratulated the Association on having in a way amalgamated with the fruit-growers and horticulturists. He said we should follow the example of these associations, which, not content with holding annual meetings, are going out during the year to hold orchard and garden meetings. We are in an era of greater prosperity and should help those who are starting in the business. We should have apiary meetings to give instructions in the best handling of bees. We should also recognize the fact that apiculture is taught only at the Agricultural College by offering an annual prize to be competed for by students at the college. The Professor then took up his subject:

DISEASES OF BEE-LARVÆ.

The diseases of the larvæ of bees may be roughly divided into two groups: one, in which the disease is contagious, and the other in which the disease is not due to a special virus but to some physiological or physical cause. The contagious diseases are the most harmful, as they spread from hive to hive and from one apiary to another, often producing a severe epidemic.

In all cases of infectious diseases there must be present a virus or a living organism which may be a fungus or a mould-like growth, or due to minute organisms, which are popularly called bacteria. These micro-organisms may be carried from one hive to another in many different ways, and the following are the principal means by which contagion is spread, and infection caused:

1. Bees entering wrong hives.
2. Bees robbing a diseased colony.
3. Feeding bees with honey from an infected hive.
4. Inserting diseased combs into healthy hives.
5. Using as a foundation, wax from a diseased colony which has been improperly boiled.
6. Transferring bees into hives that have been inhabited by a diseased colony without first thoroughly disinfecting it.
7. Placing a hive upon a stand previously occupied by a diseased colony.
8. The handling of healthy colonies by the bee-keeper after manipulating diseased hives.
9. The introduction of a diseased queen.
10. Healthy bees visiting flowers which may have been infected by diseased bees.

All these are means by which infection can be carried or transferred from one place to another, and evidence can be brought forward to show that disease has been produced by each of the different means above mentioned. "Foul brood" being the infectious disease which is best known naturally affords more examples of these methods of transmission than any one of the other contagious bee diseases.

It is important that all bee-keepers should clearly understand these means by which infection is carried; also they should have a knowledge of the appearance of the various diseases of bees so that they can diagnose or tell the kind and character of the disease in order to apply intelligently methods of prevention or cure.

I shall endeavor to give you a brief account of the general appearances of several of the best known diseases, taking them in order of their importance.

FOUL BROOD.

The larvæ attacked by *B. alvei*—the cause of foul brood—may die during all stages of their development. In every instance the larvæ lose their white and glossy appearance, when suffering from the disease, and turn to a dull yellowish, and later to a brownish, color. In the further progress of the disease, they die and collapse into a darkish brown, coffee-colored, more or less tenacious, shapeless mass. This mass is characterized by its viscid character and before it dries up can be drawn out in threads when lifted with a match or a pointed instrument. It has an offensive odor, which is said to resemble that of glue, and when much disease is present, there is an ammonia-like smell. The cap of the larvæ sinks and appears concave instead of being converse or flat, and it is often perforated with a small hole near the center. Often the appearance of this sunken cell is the first indication of disease noticed by the bee-keeper. The decomposed larvæ gradually dry up and ultimately form a dry black or deep brown crust at the bottom of the cell.

The sunken and perforated cappings, the reduction of the larvæ to a tenacious brown mass, the characteristic odor and stringy nature of the mass, and the dwindling of the colony, are the most noticeable indications and results of the disease.

As the disease advances, the offensive odor pervades the hive, and when infection is spread over a great number of brood-combs the smell may be noticed some distance away. The bees become more and more despondent over their helpless condition and ultimately succumb or in some cases desert their hive.

THE NEW YORK BEE DISEASE, OR BLACK BROOD.

For a number of years past there has existed in the State of New York a disease known to the bee-keepers there as "Black Brood." It has also been called "New York Bee Disease," from the fact that it was first noticed in that State. So far as is known it was reported first from Sloanville, N. Y. The description given by the New York Bee-Inspector is as follows:

"The young larvæ have a yellowish speck upon the body, about the size of a pinhead, while the older brood stand out lengthwise in the cell, sharp at the ends, white, but not capped over. This brood dies, and is either removed by the bees or later flattens down in the cell and becomes a cream-colored, and in a later stage, a coffee-colored, mass. Later in the season some brood that died in the cells which had been capped over, becomes a rotten mass, a coffee-colored matter about the consistency of heavy honey. A toothpick dipped into this and drawn out causes this matter to stretch from half an inch to an inch, but does not break and fly back as quickly as in 'Foul Brood.' The smell is not very bad, but in some cases it has a sour smell; while in some of the sealed, rotten, coffee-colored brood, there is a kind of rotten smell, but not like that of the old-time 'Foul Brood.' Howard states with regard to this disease, that the brood is usually attacked late in the larval life, and dies during pupation, or later when nearly mature and ready to come forth through the chrysalis capping. Even after leaving the cell the bees are so feeble that they fall from the combs helpless. Most of the brood die after sealing. When the larvæ show the first signs of this disease there appears a brownish spot upon the body about the size of a pinhead. The larvæ may yet receive nourishment for a day or two, but as the fermentation increases the brownish spot enlarges. The larvæ dies, and stands out swollen and sharp at the ends. In time the brood becomes dark and rotten, and these rotten masses, in time, break down and settle to the lower side of the cells as a watery, syrupy, granular liquid not like the sticky-ropy, or glue-like semi-fluid substance of 'Foul Brood.' It does not adhere to the cell-walls like that of 'Foul Brood,' and has not the characteristic foul odor which attracts carrion flies, but a sour, rotten-apple smell. The cap is disturbed from without, sometimes uncapped and the cell-contents removed by the bees."

It will be seen from these accounts that whilst agreeing in some particulars there are points of difference between the two descriptions given of this disease, and probably if a bacteriological examination of the diseased larvæ had been made by Mr. N. D. West, the New York State bee-inspector, the organism which produces "Foul Brood" might have been found.

Howard, in connection with this disease, described an organism which he considered to be the causal agent of "Black Brood." He gave the name of *Bacillus millii* to it, from its resemblance to millet-seed. The *B. millii* is a spindle-shaped organism which forms spores, and, according to Howard's drawings, forms two spores in each cell, a rather remarkable occurrence, for in most bacteria, as a rule, only one spore is found in a single cell. No description is given of the germination of these spores, nor the cultural features of this organism, so that except from its peculiar shape and its ability to form two spores it would be a rather difficult matter to identify this organism.

Howard claims to have produced the disease by feeding bees with syrups containing *B. millii.*

This disease has also been the subject of an investigation by Moore and White, of the New York Veterinary College, Cornell University. These investigators have examined a number of specimens sent to them during the season, and which were labelled as "Black Brood." The ten specimens of black brood contained a bacillus which suggested by its constant presence that possibly it was the cause of the trouble. It was thought first that the bacillus so constantly associated with the black brood was the bacillus described by Howard as *B. millii;* but a more extended study of this organism showed that it resembled *B. alvei*, the cause of foul brood. A very careful investigation of this organism from the specimens of black brood confirmed the identity of the species from the different sources, and the only conclusion they came to was that the prevailing bee-disease in the State of New York was similar to, if not identical with, the foul brood of other States, Canada and Europe.

From this evidence there seems to be some doubt as to whether black brood is a new disease, caused by a new or partly-described organism, or whether it is merely a disease closely allied, if not identical, with foul brood, but occasionally showing appearances which are different from the typical appearance of foul brood. Further investigation will be needed before this question can be properly settled.

PICKLED BROOD.

Pickled Brood is said to attack the larvæ about the time of pupation, and the appearance of the larvæ is similar to those that are infected with black brood, except that the brown spot is not present and no decomposition from putrefactive germs takes place in pickled brood. The cappings are usually undisturbed and the decayed brown masses do not adhere to the cell-walls. According to Howard, the infection in pickled brood is in bad pollen, and new pollen always causes it to disappear.

The cause of this disease is said to be a fungus (*Aspergillus Pollinis*). Moore and White, who examined five specimens of pickled brood, report no fungi present, but various micro-organisms were found, none of which, however, were specific.

CHILLED BROOD.

The cause of the death of the larvæ from this calamity is cold, as the name correctly indicates. It generally occurs when, after warm weather, which has induced the bees to deposit brood freely, a sudden change takes place, or very cold nights set in again. The brood in the center combs and where the bees cannot cover them sufficiently generally suffer most. The larvæ may be killed during all stages of their development, but the capped brood rarely suffers to any extent unless the change of temperature is much prolonged. In cases of chilled brood the larvæ turn gray, afterwards the color darkens and in the final stages of decomposition it becomes black. No ropiness develops and the putrid mass is more or less watery, and its smell is said to resemble stagnant water. No relation exists between chilled and foul brood although many writers have mistaken the one for the other or have stated that chilled brood turns to foul brood. Schirach, as long ago as 1769, clearly distinguished between the two. In fact, he said that chilled brood is no disease at all.

"Chilled brood" is caused by putrefactive bacteria which attack the larvæ *after* death. In foul brood and other infectious diseases, the micro-organisms attack the living brood and *cause* their death.

STARVED BROOD.

Occasionally instances of the starving of brood have been noticed. This occurrence probably can be explained by an abundant honey-flow, having induced the bees to encourage a large brood deposit, when after a severe extracting of honey, the bees were suddenly checked in the gathering of food for some time through bad weather. The brood do not die suddenly but become emaciated and dry up, rather than putrefy. This affection is of rare occurrence, but it is curious and interesting to note that Virgil in his Georgic on the husbandry of bees mentions starvation and the cure for it. The lines are as follows:

> When sickness reigns, (for they as well as we
> Feel all the effects of frail mortality),
>
> By certain marks the new disease is seen,
> Their color changes and their looks are thin;
> Their funeral rites are formed and every hee
> With grief attends the sad solemnity;
> The few diseased survivors hang before
> Their sickly cells and droop about the door,
> Or slowly in their hives their limbs unfold,
> Shrunk up with hunger and benumbed with cold.
>
> * * * * * * * *
>
> Now lay fresh honey near their empty rooms,
> In troughs of hollow reeds whilst frying gums

Cast 'round a mist of spicy fumes.
Thus kindly tempt the famished swarm to eat
And gently reconcile them to their meat.

TREATMENT AND REMEDIES.

"Remove the cause, and the effect ceases." Practically all the various methods of cure of the infectious diseases of bees adopt this maxim more or less thoroughly. The various starvation methods aim at getting rid of the infected honey and the infected combs. The method of conquering the disease by feeding medicated syrups aims at the destruction of the vegetating bacteria, or preventing them from growing and the spores from developing. At the same time the action of the medicine may in some way exercise a tonic effect upon the bees. Treatment by means of disinfection by formalin or other vapor destroys the greater amount of infecting material which is present in the hives and in the comb, relying upon the natural resistance of the bees to get rid of any micro-organisms that may be present in or upon them. The beneficial results obtained from any of these methods depend upon the thoroughness with which they are carried out.

Thus we have numerous instances of the starvation method failing, because of failure to disinfect the hive. Medicated syrups often fail because of methods of application; the use of weak or feeble drugs, and not using the medicine for a sufficiently long period at a time.

We have also occasional instances of the failure of the formalin treatment, perhaps due to improper methods of application, not using strong enough formalin, or not disinfecting the combs and hives in an air-tight box. These failures should not be counted against the method of treatment, for I am convinced that anyone of these methods, if properly and conscientiously carried out, will cure even the worst case of foul brood, which of all the infectious bee diseases is the most difficult disease to deal with.

It remains for each bee-keeper to decide for himself as to the method of treatment he intends to follow, and having made up his mind, he should carry out that treatment intelligently and thoroughly.

F. C. Harrison.

HOW TO MANAGE THE BEES.

"A Season with the Bees and How to Manage Them," by A. E. Hoshal, was next on the program. This was an illustrated talk in which the speaker had the hive and implements with which to show just how he did the various things described. He spoke to beginners rather than to old heads. There had been three main systems of bee-keeping—the box-hive system, the movable-frame system, and the case system. The old-fashioned way required no description. The second had for its root-principle the manipulation of individual combs. The third was a system of manipulating cases instead of combs. Mr. Hoshal believes the case system to be the best. The first week in June go out to the yard with smoker and veil. Get a good smoker; an experienced man can do with a poor smoker better than a beginner. You will soon discard the veil. Unpack the bees from their winter boxes. Some will have double-case brood-chambers, some single. When the honey starts, put on a slatted honey-board and another case. A single brood-chamber colony will give as much honey as a double brood-chamber colony in a short season.

A deep-frame hive gives the top third of comb filled with honey. The honey will be crowded downward as the season advances. The shallower the frame the less honey is stored in its upper part. With the Heddon cases the honey can be raised and empty combs put right over the brood. These shallow cases with narrow top and bottom bars to frames are accepted more readily than deeper ones. Then the narrow top and bottom bars admit of seeing right through between the combs to see the exact condition of things without handling the individual combs.

For clipping queens, about the 8th or 10th of June drive the bees up out of the lower case and through the excluder. The queen will be found on the top bars or on the under side of the excluder. It is an advantage to clip when the flow is on, as a smaller percentage of queens is lost. Then the queen is returned to the empty lower case where there are no bees to ball her.

When swarming-time comes, have hive ready with two cases, one empty and the other filled with combs. Catch the queen in a cage when she comes out. Lift off the supers. Set the hive off the stand and the new one in its place. Put the supers on the swarm. Close the entrance of the parent hive with grass. In a few days take out the empty case from underneath and give plenty of super-room. In the parent-hive are queen-cells and danger of after-swarms. In 8 or 10 days shift the parent hive so as to throw the flying workers into the swarm.

Spring management consists in having good queens, plenty of stores, warmth, and *let alone*.

Towards the end of the season remove the honey with escapes. Be careful not to take all the honey. Leave the lower surplus case. For winter, unite weak colonies in July as soon as the flow is over. Set one on the other; don't care if old bees are killed. The brood is what counts. Each hive must weigh 50 pounds if double; if a single case, 40 pounds. Make up shortage by feeding in the fall. In spring *let severely alone*. Much handling in spring causes loss of queens. Note the importance of having the brood-chamber shallow and filled with brood.

Mr. W. J. Craig then read a paper on

THE INFLUENCE OF BEE JOURNALS.

Considering the subject of the influence of bee-journals broadly, we may rightly apply much of what has been said, and can be said, of the influence of current literature generally. We live in an age of literature, an age when people read a great deal and think a great deal, and whether in the form of newspaper, magazine, book or pamphlet, such reading must necessarily wield a large influence over the individual and community, in the formation of opinion, the moulding of character, and the regulation of action.

Bee books and journals have taken their distinctive place among the literature of the world. From recent statistics we find that there are over eighty magazines devoted exclusively to bee-keeping. France leads the way with 19, Germany 11, Russia 9, Belgium 9, United States 7, Austria 6, Italy 3; England, Spain, Algiers and Australia 2 each; Denmark, Switzerland, Sweden, Norway, Holland, Romania, Nederland, Ireland and Canada, one each.

These magazines must, as a matter of course, have an effect upon the bee-keeping of the many thousands of readers they represent; all of them advocating better bee-keeping, better systems of management, better marketing, presenting new theories, reporting new discoveries and inventions, vicing with each other in original matter from the best authorities, and in carefully-selected matter from the most reliable sources, standing up for the right and exposing and denouncing the fraudulent and the wrong.

All this can be truly said of present-day bee-journals; they are, in brief, doing all that they possibly can do for the furtherance and development of the bee-keeping industry. This statement may no doubt be questioned by those who consider the motive of the bee-journal always a selfish one, and that it exists merely for the sake of direct gain to the publisher, or a desirable adjunct to his business. Such view is narrow, and mean, and selfish in itself. None of the journals that we know of are making a fortune; in fact, some of them would have gone out of existence long ago had it not been for the substantial financial support of their publishers.

Guide-books and hand-books on general management are good and useful as references, or for the beginner in laying a foundation of sound apicultural knowledge, but if the novice is to advance, with advancing thought and advancing methods, he must have access to current bee-literature. The bee-keeper's column of the newspaper or agricultural magazine, no matter how well conducted, cannot be satisfactory to the bee-keeper who would make a success of his bee-keeping, and can never take the place of the journal devoted exclusively to apiculture; in fact, the most dangerous and obstinate heresies that bee-keepers have had to contend with have issued from these sources.

Local conditions and requirements, apart from loyalty to State or Country, make the support of the local representative magazine of first importance; then as many others as the bee-keeper feels he can afford. Unfortunately the great mass of small bee-keepers do not seem to have a proper estimate of the value of apicultural information; they are interested to a very small extent—"only a few hives for their own use," they tell us; but somehow more or less of their ill-favored product finds it way on the market, to the detriment of the excellent article placed there by the intelligent producer. There are probably upwards of 8,000 such bee-keepers in our own Dominion, whose bee-keeping is of the crudest character.

Our Canadian publication needs the coöperation of this Association much more than it has been favored with. There is no lack of ability on your part to make the Canadian Bee Journal more distinctly Canadian, and to rank like Canadian honey—the "first of its kind." W. J. CRAIG.

Messrs. Deadman, Holtermann, E. Grainger, R. H. Smith, Chadwick, Sparling, Dickenson, Darling and others spoke of the importance of bee-journals in general, and of our national bee-journal in particular. Bee-keepers should not only subscribe, but should contribute of their best thought to the Canadian Bee Journal.

Mr. W. Z. Hutchinson sent a paper on

QUEENS AND THEIR INFLUENCE UPON SUCCESS IN BEE-CULTURE.

I expect it will be called heresy, but, many times, when reading extravagant expressions about "the whole of bee-keeping centering upon the queen," I have felt like exclaiming: "Other things being equal, one queen is as good as another." This may be putting it stronger than it will bear; besides, it does not *exactly* express my meaning. Perhaps I can not make myself exactly understood, but I will try.

It is not so much what a queen is *herself*, as what her ancestors were; or, rather, what her *bees* are. That is, she may be an insignificant-looking specimen, may have been reared in a manner wholly at variance with the established principles of queen-rearing; may be one of those short-lived affairs whose days are soon numbered, yet, if she comes from the *right stock*, her bees, whatever may be the number of which she becomes the mother, are *just as good bees as can be produced*. In other words, there is no system of queen-rearing that will improve a strain of bees.

Try and not misunderstand me. To be sure, we must have queens that are sufficiently prolific to keep the brood-nests full of brood at a time of the year when this is desirable; and possessed of a longevity that will enable them to perform this feat two or more seasons; having this, what more is needed? As a rule, the honey-producer need trouble his head very little about the rearing of queens. The bees will attend to that, and rear just as good queens as are needed. If his queen don't fill the brood-nests in the required season, how much more practical simply to reduce the size of his brood-nests until the queens *do* fill them, instead of ransacking the earth for more prolific queens, or else by twisting, turning, and shifting about of combs, endeavor to make one queen lay an increased number of eggs.

As I look at the matter, in the light in which I am discussing it, the queen is simply the vehicle of transmission from one generation to another. It is the *qualities* to be transmitted, rather than the *vehicle* of transmission, that should receive our attention. To illustrate: A man has a strain of bees that are of little value as honey-gatherers. Can he, by any sort of "jugglery" at queen-rearing, transform them into energetic workers? Something might be done in the way of selection, but not by methods of queen-rearing.

Bee-keepers often tell how much better are the bees from the queen secured from this breeder than from the queen bought of some other breeder, or that the bees from the daughter of a queen from a certain breeder are superior to bees from the daughters of some other queen, and have argued from this that the queens, and the manner in which they were reared, caused the difference in results. I say *no*. The difference is in the *strain of bees*, and not in the manner in which the queens were reared.

That there *are* circumstances in which much depends upon the queen it is idle to dispute. Some of our best bee-keepers have argued against extra-prolificness in queens, some of them even going so far as to assert that prolificness in the queen is at the expense of quality in the bees; but that prolificness is all-important to the user of large brood-nests can not be dodged. *He* must have prolific queens, else one-half of his brood-chamber is transformed into a store-room. But this extra prolificness is not secured by some pecular method of queen-rearing, but by *selection*—by rearing queens from the colonies having the most prolific queens. Here, again, the queen is simply the vehicle for transmitting the quality of prolificness from one generation to the other.

The *age* of queens may also have some bearing upon success. Where the harvest ends with white clover, more surplus will be secured if the bees do not swarm; and colonies with young queens are far less likely to swarm. Then, again, young queens lay much later in the fall, and this has a bearing upon the subject of wintering, as also does the time when they begin laying in the spring.

As I have already said, we need queens sufficiently prolific to fill the brood-nests with eggs at the season of the year when this is desirable, and possessed of a reasonable amount of longevity. This secured, nothing more needs consideration except the *stock* from which they come. Naturally, when a man buys a queen, he expects to get the worth of his money. If he buys her to rear queens from, he expects her to be able to endow her royal offspring with the qualities and characteristics of her ancestors; and, if she does this, he need not mourn if she lives only long enough to allow him to secure a goodly number of her daughters. If he buys queens in large quantities to re-queen an apiary, he has a right to feel that he has been cheated if the queens live only a few short months. The practical honey-producer has not this problem to solve. Simply let the bees rear their own queens, and they will be as good as any. That queens can be reared artificially, the equal of any, there is no doubt. Most *certainly* they can. How it can be done has been repeatedly published.

As I said at the beginning, we have a lot of sayings something like the following: "Good queens are at the foundation of bee-keeping." "Bee-keeping all centers about the queen." "As the queen lays all of the eggs, of course, success depends upon her." It is to combat such ideas as these that I have written. The queen is of no more importance than the hive, the combs, or the location. By importance I mean, in this case, that which can by some decision, or management of the bee-keeper, be made to contribute to his success. W. Z. HUTCHINSON.

Mr. H. G. Sibbald read a paper on

FOUL BROOD.

A disease that attacks the larvæ or brood of bees, the most dangerous and destructive of any of the diseases that bees are subject to, and had made such headway that the Ontario government a number of years ago passed a law and appointed an inspector for its suppression. Credit for obtaining this excellent law is due, I believe, to our Ontario Bee-Keepers' Association.

Since the inception of the law and inspection, the disease has been checked and is better understood by the mass of expert bee-keepers. Still, on account of the contagious nature of the disease, and the ignorance of a few, the expert is constantly in danger as long as it exists and bees are in the hands of these few.

It is therefore a subject worthy of a place in our program, and of a full discussion by those who, like myself, have had to their sorrow more experience than is desirable or profitable.

The larvæ or brood in its early stages is attacked by the foul brood germs, decomposes, decays, and settles in a shapeless mass to the bottom and lower side of the cell; becomes yellowish-brown in color at first, later brown or coffee-color; gives off a very offensive odor, and if pricked by a pin or toothpick, it will be found ropy, and will draw or string out a half inch or so. If the cell has been capped the capping recedes, and presents a sunken appearance. In time the matter dries down and is of such a sticky, gluey nature that it adheres strongly to the side and bottom of the cell. Thus leaving what we call the scale or stain-mark of foul brood.

Other forms of dead brood, such as chilled, stained, pickled and poisoned, are different and may be described as follows:

The larva dies, but holds its form better, that is, shrinks and dries from the outsides; gives off very little odor and less offensive; does not adhere so tightly to the cell side, and may be removed by a pin or toothpick, and when pricked by them will not string out but appears watery. They will be removed by the bees themselves.

Not so with foul brood, however, for, soon after the death of the larva, it becomes so foul that I verily believe not a bee can be found that will attempt to clean it out. The cell is apparently avoided until it becomes dried down and the odor has become less noticeable. The bees then accept it again, and after polishing it, fill it with nectar. The moisture thus applied softens the scale or stain-marks and releases the thousands of foul brood germs, which float in the honey or nectar, awaiting only until fed to larvæ, thus coming in contact with congenial matter, causing its death and their further development and multiplication. Thus it spreads more and more, cells become polluted, the colony dwindles and dies, leaving its honey a prey to robber-bees which unsuspectingly carry it to their homes and thereby transmit the disease until an apiary will soon be destroyed and neighboring apiaries jeopardized.

Every person who keeps bees, whether they have many or few, should study and try to be able to detect the disease in its early stages, and know how it may be carried from one hive to another, which might be briefly summed up in a few words. In any way in which honey or the stain-marked cells can be changed from one hive to another. Watch the brood—take an interest in it; whenever you lift out a frame take a look at the brood. If it is all healthy, fat and white-looking, all is well. If not, apply the tests and find out what is the matter, and, if you find the real thing, close the hive and mark it and consider.

To cure it, we must get rid of the combs and honey, for therein is the disease and germs.

Go to the colony late in the evening when the bees will not fly or scatter to other hives. Shake the bees off into the hive and give a set of frames with foundation starters. We have thus gotten rid of the combs as far as the colony is concerned. Not so with the honey. As soon as we disturbed the colony the bees loaded themselves with honey, and we must still get rid of that. They also clean up any that shook out during the manipulation on the floor of the hive, and any that remains on burr-combs or was attached to the inside of the hives. This they would store if they had a particle of comb supplied ready. We have only given foundation starters, however, and they must work it out. Wax-secretion is necessary, and most of the honey is digested and used; but they soon have cells built and may store some of the diseased honey therein. To make a complete cure it is therefore necessary again to shake three days later, the same way as before, and supply full sheets.

Melt up or burn up the old combs and the first set of starters, and the cure is complete, if properly carried out.

This cure can only be applied in the early part of the season, and during a honey-flow. If no flow is on, the bees must be fed or they would swarm out, and perhaps scatter into one or more hives, and thus make matters worse. If the disease is discovered late in the season, and the colony still strong, leave it until November, take the combs away and supply honey from a clean colony, in full, sealed combs. The queen is not now laying, and any honey that they have picked up will be consumed first, and thus out of the way.

If a yard of bees or apiary is badly diseased, when discovered, send for the inspector or some one who has had experience, so that it is unnecessary for me to describe how to go about curing a badly-infected yard.

In looking for the disease, hold the frame or comb so the light may shine into it. The stain-marks may be seen by standing with your back to the sun, and holding so the light will shine on and into the lower side of the cell.

In dealing with foul brood, the first loss is the least, and while it is well to cure as economically as possible, if we have a large number of colonies, plenty to do, and the disease is not discovered until after the honey-flow, it would be better perhaps to destroy the combs and kill the bees. The top story or super-combs, if very clean and free from pollen, may be saved by having the diseased colony clean it out before curing. But in this case, again, perhaps the first loss will be the least and it might be better to melt the combs.

Never put a diseased colony into winter quarters.

Always clip the queen before shaking to cure.

H. G. SIBBALD.

Mr. Hoshal—When I treated my own yard, it had not fully developed. In the first stages if we change the queen we cure the disease.

Prof. Harrison—There are different degrees of virulence in foul brood as in typhoid or other human diseases. There is no specific method for curing foul brood. Mr. Sibbald has carried out the Formalin Method very well. It is considered an efficient disinfectant in the case of human diseases, and should be so for *Bacillus Alvei* if properly used. The gas generated is more potent if the temperature is low and there is lots of moisture. Either hang wet sheets or turn on steam to get moisture. Leave in a tight box for 18 to 24 hours. Bertrand recommends medicated syrups—formic acid. Through long exposure the bees of Europe have become partly immune to the disease. In a similar way the sheep of Algiers are partly immune to anthrax.

INSPECTOR OF APIARIES' REPORT.

During 1904 I visited bee-yards in the Counties of Norfolk, Brant, Simcoe, Victoria, Perth, Oxford, Wentworth, Lincoln, Peel, Grey, York and Ontario. I inspected 91 apiaries, and found foul brood in 32 of them, and dead brood of other kinds in many others.

The spring was one of the most unfavorable for bees that we have had in many years. At no time during the spring did bees bring in honey fast enough to keep pace with the amount of larvæ that required feeding, and the result was that more or less starved brood was to be found in every apiary. I received many samples by mail of starved brood, asking what it was, many dreading it to be foul brood because some of the capped cells of brood were punctured. I also received samples that contained both foul and starved brood in the same comb.

I set the bee-keepers to feeding in every apiary that I examined during April, May and the early part of June. I was much pleased with the way the bee-keepers took hold and cured their apiaries of foul brood.

It is one thing to know how to cure an apiary of foul brood in the shortest possible time and to do it with the least loss, but it is quite another thing to handle all classes of men, and particularly so when things get into hot dispute over the sales of diseased colonies, and notes for large amounts have been given. No man on earth can deal with cases of this kind so well as the inspector, and I always claimed the right to have such cases placed in my hands to deal out justice to both parties, and I am pleased to say that they were always left to me, and that I got things settled very nicely.

Death makes big changes, and where the widows had diseased apiaries and wanted to sell the bees, I managed the business for them, and had everything put to rights as nice as the flowers of May, and secured fair prices for them.

In every locality that I went into I picked out the best bee-keeper in it to go the rounds with me, so that he could (on the quiet) let me know from time to time how the people were getting on at the curing. By keeping in touch with the business this way, I was able to get everything put to rights with the help of the good men that "I picked out to pad the road with me."

With the help of those men and very many others, I have not only driven the disease out of the Province in the most wholesale way, but converted the foul-broody apiaries into the best paying ones in Ontario.

No Province or State in the world had as much foul brood in it as Ontario had when I first started out to cure the diseased apiaries of foul brood, and now no country has as many fine, clean ones for the number kept.

For the very courteous treatment that I received from every person while on my rounds, I return to them my most heartfelt thanks.

WM. MCEVOY.

Mr. F. J. Miller read a paper on

THE PREVENTION AND CONTROL OF SWARMING AS USED WITH THE HEDDON HIVE IN THE PRODUCTION OF EXTRACTED HONEY.

The subject assigned me is one leading up from early spring management, hence my article begins with the work as the hives leave the winter-cases. At this time supers are put on all colonies showing sufficient strength. Queen-clipping follows as rapidly as possible, great care being taken that no queen is allowed to pass unseen although last year's record may show her to have been clipped. Apple-bloom is now closing, and some queens may yet remain unclipped; this makes but little difference with the short-cut methods of handling the divisible brood-chamber hive, and the work is completed as I must *know* that every queen is clipped in order to carry out our future plans.

During this early management a watchful eye is kept that no colony becomes congested with honey in the brood-nest. If the queen is being crowded and not allowed all the room she can occupy, the divisible brood-chamber hive affords the quickest results possible with the least amount of labor. We simply divide the center of the brood-nest horizontally by exchanging the two sectional parts of the brood-chamber, i. e., by replacing the bottom-chamber with the top one, thus placing honey in the center of the brood-nest. This being averse to the instinct of the bees the honey is quickly removed. The brood now extending to the top-bars under the queen-excluder, the honey is carried above this line into the supers, leaving empty cells for the use of the queen in the center of the brood-nest as it now exists.

During the week of honey-dearth between fruit-bloom and white-clover, this interchanging of the brood-nest has the same stimulating effect as feeding, or the uncapping of honey. With the opening of white-clover supers are again added underneath on the tiering-up plan, as soon as the last one contains from five to seven pounds of nectar.

About this time, or as soon as the indications of swarming are apparent, each yard is visited as nearly every four days as the weather will permit. During these visits each hive is examined for queen-cells by simply raising one end of the top section of the brood-chamber, and drawing slightly forward and raising it up about six inches, thus giving a view of the bottom-bars, which will expose a part of any queen-cells that may be present. If there are no cells in view the hive is closed, the work being completed; but if, on the contrary, queen-cells are started, or in any stage of completion, then a division is made as follows:

The top section of the brood-chamber with queen-excluder, and, in most cases with the queen, is removed and placed on top of a chamber of foundation or empty combs at the side of the colony; also placing a chamber of foundation or empty combs on the colony. Add a queen-excluder and return all supers to the colony. All danger of swarming is now over for the present. An abbreviated entry is now made, showing at a glance the date of this division.

On returning to the yard in four days the usual examination takes place; in five cases out of six the entrance of the division made four days ago will show dead drones, indicating the presence of the queen. A record now being made to this effect no further work is required on this division or parent-colony during this visit.

Four days later, or on the second visit after the division is made, the colony must have the queen-cells removed from the combs in the bottom section of the brood-chamber, and as they are likely to have larvæ yet held back, of which they will again start queen-cells, they require cutting again any time within the next two visits, and either give a virgin or laying queen, or return the division to the colony. Or the division may be left in the present condition beside the colony until the busy season is over, when according to the strength and amount of honey it contains, it is made use of either to be placed on a separate stand or to be united with another division.

The system I have here outlined is one I have used for several years, and have found it to work admirably. The loss from absconding swarms does not exceed an average of two, or possibly three, for each yard during the season. Being a system of short cuts it is capable of much improvement, according to the skill of the apiarist; and reduces the amount of skilled labor to a minimum, one man being able properly to attend to three or four yards of 90 or 100 colonies each, doing all of the yard work himself, only requiring the aid of one unskilled helper in the honey-house during extracting.

Having endeavored to give as concise an account of my work as possible, I may have left out details, but I trust it may bring out either discussion or thought that may be profitable to the members present. F. J. MILLER.

(Continued next week.)

Our Sister Bee-Keepers

Conducted by EMMA M. WILSON, Marengo, Ill.

Report for 1904—A Propolized Experience.

DEAR MISS WILSON:—I know I am very tardy with my report, but I was extremely busy at the time it should have been made. We have been building a new house, and moving therein—no doubt most of the sisters know that to move means work.

I had 13 colonies in the spring, 6 of which I bought in all kinds of boxes, and they had black queens. I now have 17 colonies of Italians (some few of the bees are possibly hybrids) in Danzenbaker hives.

I harvested 769 sections of honey, most of which was fall honey, the spring crop being almost a failure. The best colony stored 143 finished sections. Some colonies containing black queens stored—nothing. Some of the fall honey is beautifully white, much nicer than the spring honey. (It is from wild aster.)

My bees are experts on propolis, this locality being adapted to any amount of practice, and for the benefit of any other propolized sufferers I will tell how I changed my Danzenbaker hives. Of course if I hadn't been ignorant I never would have put all of my bees on closed-end frames, and frames that rest on cleats way down in the middle of the hive, at that. (No doubt the Danzenbaker hive is all right in localities non-propolized.) There was no such thing as not disturbing the bees whenever a frame was removed. I did well if I didn't smash the whole business. To pull the little flimsy follower all to pieces was generally my first act. I borrowed a draw-knife and converted the closed-end frames into staple and nail spaced frames, and ripped the cleat from the center of the hive and nailed it near the top, taking care to place them so as to leave a bee-space over the frames. I then drove all rivets of the frames back, and substituted sixpenny nails, driving them near the top to support the frames.

Trouble? Yes, but now I have a hive containing open-end frames, which rest on cleats at the top of the hive, and are supported by nails—a hive which I like very much, and can overhaul at any time without the aid of the whole paraphernalia of a carpenter's shop. A good, strong screw-driver is all that is needed.

Perhaps some day I'll give my experience with my observatory hive. MRS. C. D. MEARS.

I wonder, Mrs. Mears, if all the sisters will enjoy as hearty a laugh over your letter as I did. Now you may not think this very sympathetic, but, really, you must not be so entertaining in your recitals if you expect us to weep over them. However, you seem equal to any emergency and do not need our sympathy very badly. If all were equally frank in telling of their failures as well as their successes we might receive much benefit.

You say your best colony gave you 143 finished sections while some colonies having black queens gave—nothing. Now perhaps the fact that they were black was not the only reason why they did nothing, for some Italians are equally lazy, and it is a fact well worth remembering that by breeding from your best queen you can increase no little your average yield per colony.

Honey in Aikin Paper Bags—Fence Separators and Tall Sections.

MISS WILSON:—Beg pardon for breaking into the Sisters' department, but how am I to help it after reading Mrs. L. Schmitt's letter on page 23? "Oh, gee, but it's nice to be crazy," as the comic songs runs, but the editor of the "Oregonian" is still at large.

Mr. W. H. Pennington is one of my very good friends, and I have but recently returned from a short visit to his home yard. He is indeed an enthusiastic convert to the "Aikin honey-bag" system of putting up extracted honey. He has several honey-tanks of from perhaps a ton to about 5 tons capacity; from these the honey is drawn off into the Aikin bags.

Mr. Pennington has developed some exceedingly useful things in the line of moving bees, artificial pasturage, etc. He uses largely the standard 10-frame hive, with shallow extracting-supers of *unspaced* frames. He has 80 colonies in hives containing 13 frames of the regular Dadant size, and they always give a satisfactory crop and fill the supers just as quickly as do those in the 8 or 10 frame hives. But, in a good season, they *swarm*.

Yes, you may be sure "that honey is all right."

Just tell "the sisters" to go slow in the fence-separator-tall-section fad. I have been all through it, an enthusiastic advocate of its *mostly imaginary* advantages, to my great loss. Am now changing back to the good, old universally satisfactory 4¼ x 1⅞ section. Have 600 new supers containing single-tier wide frames (section-holder *with* top-bar). They are *the thing* here. Have some T supers, but they are *no good* for me and this locality. The wood of the sections is stained fearfully, and I am surprised that such is not the case in a "gluey" locality like Marengo.

Ada Co., Idaho, Jan. 14. E. F. ATWATER.

No need to apologize, "Brother" Atwater, for breaking into the Sisters' department in such a case. The amount of Mr. W. H. Pennington's honey crop was sufficient guarantee that he was all right.

The T super is all right at Marengo. Sorry such is not the case in your locality. Perhaps you do not use a little stick, as we do, to fill up the space between the sections at the top. That does not allow much chance for bee-glue.

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National Bee-Keepers' Association

Objects of the Association.

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00.

General Manager and Treasurer—
N. E. FRANCE, Platteville, Wis.

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Fruitful Trees High in Quality Low in Price
Millions of Fruit and Forest Trees, Apples, Peaches, Cherries, Grapes and Strawberries, R. Mulberry and Black Locust Seedlings at special prices. Freight prepaid on $10 orders. Guaranteed to reach you fresh and bright. Don't miss our free catalogue.
GAGE COUNTY NURSERIES
Box 646 Beatrice, Neb.

FOR SALE—About 50 colonies and enough hives for about 50 more; L. frames, dovetailed hives, 10-frame hives, Ideal supers, frames for each super, 2-frame Cowan Reversible honey-extractor, tank, etc., and honey-house, if desired. J. W. JACKSON, Opelousas, La.

4 Largest Sizes Soot Burning
Never Go Out
And last from 5 to 21 years
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Original
Direct Draft
CLEAN
Bee Smokers
Pat'd 1878, '82, '92 & 1903
Tin 4-in. Smoke Engine $1.50. 3½-inch $1.10. 3-inch $1.00. 2½-inch 90c. 2-inch Wonder 65c—per mail.
Sent on receipt of price per mail.
T. F. BINGHAM, Farwell, Mich.

OTISVILLE, PA., Jan. 18, 1904.
Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. FRED FODNER.

Reports and Experiences

Cook County Bee-Keepers—A Hopeful Fraternity.

What is the matter with the bee-keepers in our county? I have not seen a report from any of them. Are they all in "blasted hopes" like myself?

I had about 100 colonies of bees April 1, 1904, and secured about 1500 pounds of extracted honey, of not very good quality. I put very few sections on, as I saw that it was a useless task. The number of colonies has decreased to 95, and a few of them are weak. I fear they will not winter very well on account of poor stores. I have 40 colonies outdoors that had a good cleansing flight lately. The other 55 are in the cellar. They have more dead bees than usual, and they may suffer considerable loss especially if the spring is late. But I hope it will not be. We bee-keepers are a hopeful lot of people. We hope for a better season, hope for a better price of honey, hope that the trust will not raise the price of supplies, and a good many more hopes.

Many of the neighbor bee-keepers have stopped using movable-frame hives, and will run for bulk comb honey.

I have tried buying supplies from the "Cheap Johns", but do not want any more of them. Some of the goods are dear as a gift. I make my own hives and find that I can earn a big day's wages at it, doing it by hand.
A. WICHERTS, SR.
Cook Co., Ill., Jan. 6.

Hoffman vs. Closed-End Frames.

DEAR MR. YORK:—Somebody who signs himself "Learner" wishes, on page 108, that I would make some explanations. I will respond to his request, but wish to say here that it is only because he is a learner, and knows no better, that I am willing to reply to

Mention this paper
EVERGREENS
forest trees, nursery grown and hardy everywhere. All sizes for all purposes, at lowest prices. 50 bargain lots, all first class, prepaid, $1 to $10 per 100. Catalogue and bargain sheet free.
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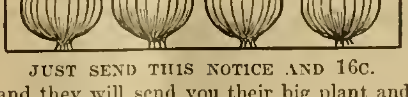
Earliest Green Onions.
The John A. Salzer Seed Co., La Crosse, Wis., always have something new, something valuable. This year they offer among their new money making vegetables, an Earliest Green Eating Onion. It is a winner, Mr. Farmer and Gardener!



JUST SEND THIS NOTICE AND 16C.
and they will send you their big plant and seed catalog, together with enough seed to grow
1,000 fine, solid Cabbages,
2,000 rich, juicy Turnips,
2,000 blanching, nutty Celery,
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1,000 splendid Onions,
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In all over 10,000 plants—this great offer is made to get you to test their warranted vegetable seeds and
ALL FOR BUT 16C POSTAGE,
providing you will return this notice, and if you will send them 26c in postage, they will add to the above a big package of Salzer's Fourth of July Sweet Corn—the earliest on earth—10 days earlier than Cory, Peep o' Day, First of All, etc. [F.P.]

FOR SALE
Several Hundred Cases
Nevada
White Alfalfa Honey
PRICE—7½ cents per pound, or $9.00 per case of two 60-pound cans, f.o.b. Chicago. Two cases or more at 7 cents per pound. Write for special price on larger quantities. Guaranteed absolutely Pure. Sample, 10c.
H. L. WEEMS,
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7A4t Please mention the Bee Journal.

1 1-2 STORY
8-frame HIVES, either plain, or bee-way supers, $1.00. No. 1 Sections, $4.00 for 1,000. 24-lb. Shipping-Cases, $13.00 for 100; 12-lb., $8.00 for 100; 20-lb. Danz., $11.00 for 100.
HIVES, SECTIONS, FOUNDATION,
etc., by the Car-Load. One year's subscription to Bee Journal free with orders of $5.00 or over. Send for free list. BERRY BASKETS AND CRATES in stock. **W. D. SOPER,**
8Etf RT. 3. JACKSON, MICH.
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BEE-KEEPERS! Send me your orders for BEE-SUPPLIES for next year's use, and get the discount: Oct., 6 percent; Nov., 5 percent; Dec., 4 percent. The above discount does not apply to honey-packages. Send for catalog. W. J. McCARTY, Emmetsburg, Iowa
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BEES FOR SALE
I wish to sell 40 colonies of Bees. They are the Italian Strain, in a good, strong condition, and are wintering good. Reasons for selling: No time to take care of them. Will sell all, or 5 or 10 colonies. Inquire of
F. M. SCHEDER,
7A4t PRESTON, IOWA.

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It is bright and up-'o-date. Tells all about Southern Home Life. t is full of fine engravings of grand scenery, uildings and famous people. Send at once. 0c a year, postpaid, anywhere in the U.S., Canada and Mexico. Six years, 50c. Or, clubs of 6 names, 50c; 12 for $1. Send us a club. Money back if not delighted. Stamps taken. Cut this out. Send to-day. THE DIXIE HOME,
21A48t No. 75, Birmingham, Alabama.

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"Bee-Keeper's Guide."
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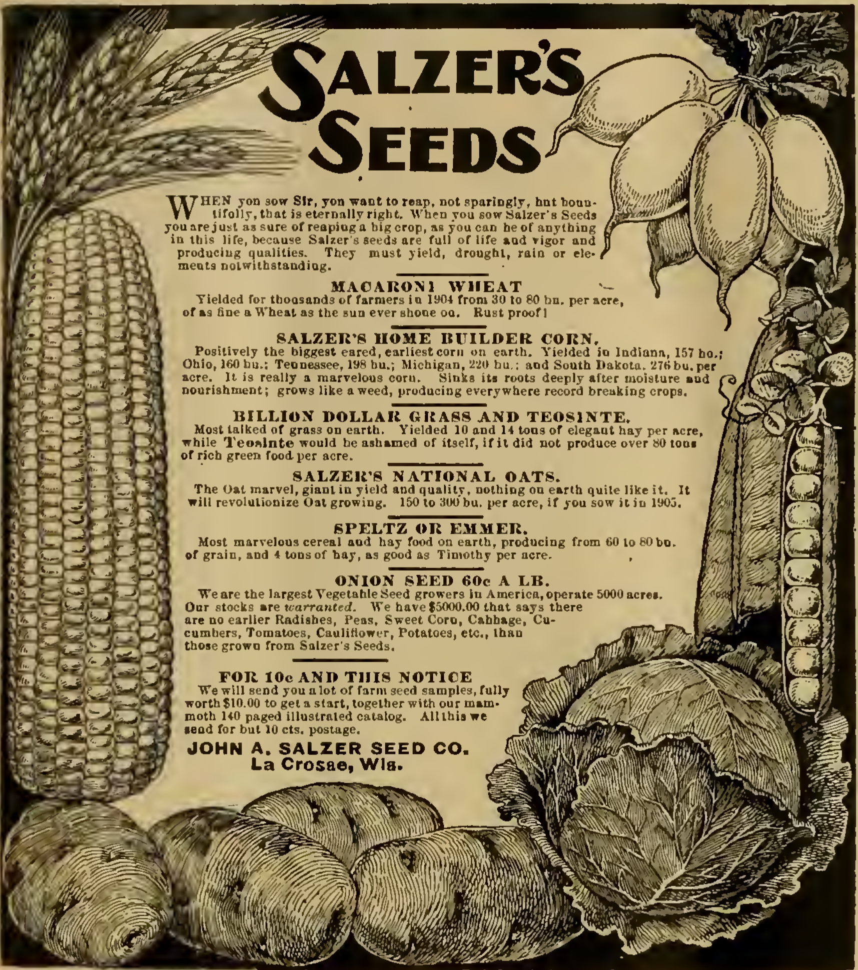
Made of artificial stone. Practically indestructible, and giving entirely satisfactory results. Comb foundation made easily and quickly at less than half the cost of buying from the dealers. Price of Press, $1.50—cash with order. Address,
ADRIAN GETAZ,
44At KNOXVILLE, TENN.



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WHEN you sow Sir, you want to reap, not sparingly, but bountifully, that is eternally right. When you sow Salzer's Seeds you are just as sure of reaping a big crop, as you can be of anything in this life, because Salzer's seeds are full of life and vigor and producing qualities. They must yield, drought, rain or elements notwithstanding.

MACARONI WHEAT

Yielded for thousands of farmers in 1904 from 30 to 80 bu. per acre, of as fine a Wheat as the sun ever shone on. Rust proof!

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Positively the biggest eared, earliest corn on earth. Yielded in Indiana, 157 bu.; Ohio, 160 bu.; Tennessee, 198 bu.; Michigan, 220 bu.; and South Dakota, 276 bu. per acre. It is really a marvelous corn. Sinks its roots deeply after moisture and nourishment; grows like a weed, producing everywhere record breaking crops.

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Most talked of grass on earth. Yielded 10 and 14 tons of elegant hay per acre, while **Teosinte** would be ashamed of itself, if it did not produce over 80 tons of rich green food per acre.

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The Oat marvel, giant in yield and quality, nothing on earth quite like it. It will revolutionize Oat growing. 150 to 300 bu. per acre, if you sow it in 1905.

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We are the largest Vegetable Seed growers in America, operate 5000 acres. Our stocks are *warranted*. We have $5000.00 that says there are no earlier Radishes, Peas, Sweet Corn, Cabbage, Cucumbers, Tomatoes, Cauliflower, Potatoes, etc., than those grown from Salzer's Seeds.

FOR 10c AND THIS NOTICE

We will send you a lot of farm seed samples, fully worth $10.00 to get a start, together with our mammoth 140 paged illustrated catalog. All this we send for but 10 cts. postage.

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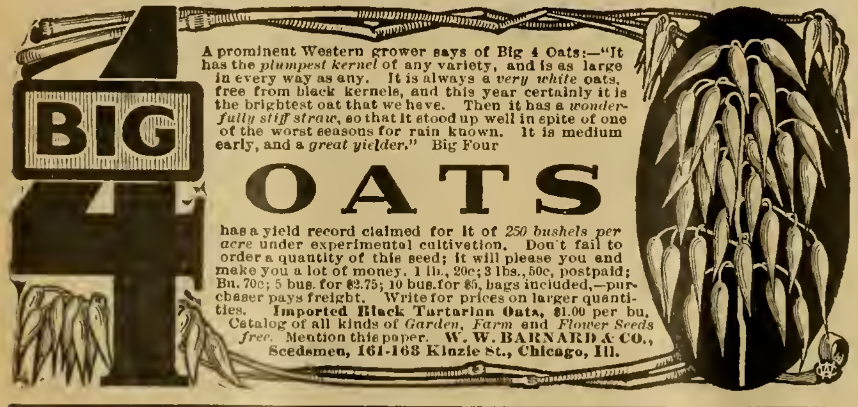
QUALITY.

The quality of our goods is guaranteed to be equal to any others made in the country. We stand ready at any time to refund your money if we do not do as we say. We can refer you to reputable firms in the city of Minneapolis, or any bank.

We sell for less money than others, because we are able to manufacture at a less cost than others are. We do not have to sacrifice the quality of our goods in order to make the prices that we do.

Of course, competitors will try to make you believe that the quality of our goods is not up to standard, because they have to get more for their goods, in order to make a profit. We guarantee our prices and the quality of our goods. Any one not entirely satisfied can have money refunded upon return of the goods.

JOHN DOLL & SON,
Power Building, MINNEAPOLIS, MINN.



A prominent Western grower says of Big 4 Oats:—"It has the *plumpest kernel* of any variety, and is as large in every way as any. It is always a *very white* oats, free from black kernels, and this year certainly it is the brightest oat that we have. Then it has a *wonderfully stiff straw*, so that it stood up well in spite of one of the worst seasons for rain known. It is medium early, and a *great yielder*." Big Four

OATS

has a yield record claimed for it of *250 bushels per acre* under experimental cultivation. Don't fail to order a quantity of this seed; it will please you and make you a lot of money. 1 lb., 20c; 3 lbs., 50c, postpaid; Bu. 70c; 5 bus. for $2.75; 10 bus. for $5, bags included,—purchaser pays freight. Write for prices on larger quantities. **Imported Black Tartarian Oats, $1.00 per bu.** Catalog of all kinds of *Garden*, *Farm* and *Flower Seeds free*. Mention this paper. **W. W. BARNARD & CO., Seedsmen, 161-168 Kinzie St., Chicago, Ill.**

Please Mention the Bee Journal when writing Advertisers ***

a fellow who is afraid of his own honest name.

In the first place, Mr. Learner uses obscure language, and also puts an obscure interpretation on some of my own perfectly clear English. I say "wide bottom-bars", but he asks: "Which one of our sages is advocating close-fitting bottom-bars?" To that question I reply that I do not know, nor do I know what a "close-fitting bottom-bar" is. If Mr. Learner will read all that is on page 293 of the American Bee Journal for 1904, he will find an answer to his question, if he means to ask what sage is advocating wide bottom-bars. I refrain from naming the gentleman from other motives than those which cause my questioner to remain incognito.

Now let me explain why I disapprove of wide bottom-bars: If a bottom-bar is 1⅛ inches wide, and frames are spaced 1⅜ from center to center, there remains only ¼ inch of space on either side of the bottom-bar as the frame is lifted from the hive. Possibly that space may be increased slightly since the comb above will be less in thickness than the width of the bar, but there will be many places, especially near the top where there is only a bee-space between the sealed honey portions, where the space will be even less. Unless the frames are well spread before a frame is raised the bees will roll into a heap right above the bottom-bar, gathering something as a snow-ball gathers, and many will be maimed for life, if not killed outright. Any one who has lifted out a frame along the bottom edge of which has been built an unlooked-for strip of drone-comb will appreciate the result. I have seen dozens of bees rolling about with broken and crippled legs after a

The ORMAS Incubators & Brooders

Low in price. Fully guaranteed.
Send for free catalogue.
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BANTA MFG. CO., LIGONIER, INDIANA.

Sweet Clover Seed

—FOR SALE—

50 lbs. or over, at 5 cents per pound. Address,
5A9t **JOSEPH SHAW, Strong City, Kans.**

ATTRACTIVE AND FRUITFUL FARMS.—There are many good reasons why every farm should be made as attractive as possible. One of the best is that it makes farm life more pleasant and relieves the bareness and monotony that often make farm life tedious. Another reason is that it pays in dollars and cents. The orchard and the garden should be as fruitful and profitable as the fields and the pastures. They should be as zealously planned and looked after. The surroundings of the house and the barns may be materially beautified and health and comfort added by the proper planting of fruit, ornamental and shade trees.

The farm garden that is well stocked with berries, bushes and vines, with roses and all sorts of small fruits, is a thing of beauty and a source of pleasure and profit. The orchard filled with fruit-trees and the lawn bordered with shade and ornamental trees, shrubs, etc., mark the home of the wise, widespread, progressive farmer.

It doesn't cost a great deal to add all of these attractions to the farm. The Gage County Nurseries, of Beatrice, Neb., right in the heart of the belt of where healthy trees are grown, has been in business for over 24 years, helping all that time to make the farm a better place to live, more attractive, more home-like, more profitable and more healthful. The beautiful homes it has helped to make dot the western prairies and eastern hills. From North to South all over the land it has sent its products and has gained a reputation for reliability, for honesty and fair dealing that it prizes very highly. The good words of its many regular customers prove that its policy is appreciated and that its products give universal satisfaction.

The Gage County Nurseries claim it costs more to sell a tree through an agent than it does to grow it. Consequently it sells direct to the customer at only a fair profit on what it costs to grow the stock. Send for catalog before you buy, listing everything in the nursery line, describing the improved facilities of its complete nursery plant, and telling why it can serve you to your entire satisfaction. Please mention the American Bee Journal when writing.

frame has thus been injudiciously pulled out. After removing such a frame just take a peep down into the hive and see for yourself.

I prefer a bottom-bar less than an inch wide, otherwise I am greatly hindered in my work when the combs are crowded with brood, bees, and honey. Wide bottom-bars have ruined many a fine queen-cell, killed thousands upon thousands of bees, and not a few queens.

Mr. Learner has apparently bettered me in my argument relating to the advantages of the "closed-end" over the "Hoffman". Were I to admit that the advantage of the extra warmth was overbalanced by the disadvantage of the killed bees, I should here and now haul down my colors; but I do not admit that. My closed-end frames save many times the number of bees killed in bees kept alive. A few bees killed in the height of the season are not felt, but a few bees saved in spring make themselves felt. It is difficult to get people to appreciate this extra warmth of closed-end frames till they try them. To see absence of spring-dwindling, rapid and sure building up in spring, early swarming or early work in sections, will make many a bee-keeper shut his eyes to the disadvantages of the closed-end frames, and will let him scrape off the few flattened mum-

A TELEPHONE ON THE FARM.—Why not? Why shouldn't the farmer and his family enjoy the convenience of this modern time-saver? Why shouldn't the farm home be brightened in every way possible?

The great problem of keeping girls and boys contented on the farm would be solved in short order, if farm-life had more of the luxuries and conveniences the city offers; if a large share of the monotony and isolation of farm life were dispelled.

The farmer himself would be greatly benefited by the adoption of some of the more necessary modern improvements his city brother employs in his home and business. For instance, the telephone. Every farm should have a telephone. If any business man needs a telephone the farmer is that man. With a telephone the farmer, no matter how remote his location from the great centers of business, comes into close contact with the outside world. He may get the market reports every day and can sell his products when the market is right. Thus, the extra price he may realize from a single crop will often pay the entire cost of his telephone and the expense of building his line. A telephone keeps the farmer in touch with his neighbors, gets help to him without delay or loss of time when help is needed or accidents occur; calls the doctor quickly when emergencies arise, day or night; often saves a trip to town in busy seasons when time is money, and cements the entire neighborhood into one big, helpful family.

Farmers are awakening to the numerous advantages of owning their own telephones and lines. Hundreds of farm lines are being built all over the country. The improved telephones and appliances built especially for farm lines by the Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y., makes the building and operating of such lines a very simple and inexpensive proposition. No better instruments and apparatus are built, and the testimonials of hundreds of users prove that the success of their lines is due to the superiority of Stromberg-Carlson telephones. They are simple, do not get out of order, or require experts to operate them. They are built for durability and efficiency.

The Stromberg-Carlson Company will be glad to hear from farmers everywhere who are interested in knowing more about telephones and how to build and operate farm lines. They have a lot of valuable information which they will be glad to send free to farmers. Write for it, and please mention the American Bee Journal when writing.

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Discount for Early Orders

We carry a large stock and greatest variety of everything needed in the Apiary, assuring BEST goods at the LOWEST prices, and prompt shipments. We want every bee-keeper to have our FREE ILLUSTRATED CATALOG, and read description of Alternating Hives, Massie Hives, etc.
WRITE AT ONCE FOR CATALOG

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Carry a complete stock of
G. B. LEWIS CO.'S
B-WARE
Lowest prices and quick service.
Send us your orders and find out.
Davenport, Iowa, 213-215 W. 2d St
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4% Discount to Feb. 1st
on the **Best Dovetailed Hive made.** Cheaper than the cheapest. Circular ready to mail. Don't miss it. 200 second-hand hives for sale cheap.
The Wood Bee-Hive and Box Co.
48Atf **LANSING, MICH.**

WE SELL ROOT'S GOODS IN MICHIGAN
Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.
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BELL BRANCH, WAYNE CO., MICH

GOOD DISCOUNTS ON EARLY ORDERS
COMPLETE STOCK OF BEE SUPPLIES--LEWIS CO.'S AT FACTORY PRICES
MUTH SPECIAL HIVE THE BEST DOVE TAIL MADE
SEND FOR CATALOG.
WE ARE ALWAYS IN THE MARKET TO BUY HONEY--SUBMIT PRICE.
THE FRED W. MUTH CO.
51 WALNUT STREET, CINCINNATI, OHIO.

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Important to You
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Is the fact that, after 20 years in the SUPPLY BUSINESS, the last year shows an increase of 33 percent over any previous year.
Is there any better proof than this, that we satisfy and please our customers?
We have the facilities, the experience, and just the kind of goods you want.
They are the ROOT GOODS, and we sell them at Des Moines at Factory Prices.
Write for estimate and discounts. We can save you money. Send to-day for 1905 catalog.

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8A5t—14E5t

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SEND TO THE
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LIBERAL DISCOUNTS on all orders till Jan. 1, 1905. 1A13t

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BEE-SUPPLIES

Root's Goods at Root's Prices

Everything used by Bee-Keepers.
POUDER'S HONEY-JARS. Prompt Service.
Low Freight Rates. ... ... Catalog Free

You are entitled to Special Discounts for Early Orders till April first.

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—IS THE BEST—
Will tell you why if you will send for FREE CATALOG AND SAMPLES.
EARLY ORDER DISCOUNT ON FULL LINE OF SUPPLIES.
WHOLESALE AND RETAIL.
Working Wax into Foundation for Cash a Specialty.
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For Farmers
The man who wants to know ALL about telephones for farmers should send for free book F-80, "Telephone Facts for Farmers." Address nearest office
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$12.80 For 200 Egg
INCUBATOR
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THE BEST THERE IS.

Bee-keepers, like all other fair-dealing people, want the BEST of goods, the BEST of service in filling their orders, the BEST of prices and the BEST of everything connected with getting their Supplies; the VERY BEST that can possibly be given for the money is necessary to give entire satisfaction and what all should have.

To absolutely please bee-keepers in filling their wants has been our constant aim for eight years, and while we do not boast about ourselves we are sure that we are excelled by nobody. If you are not already a customer don't fail to write to us and tell us your wants.

Bees, Supplies, Honey and Beeswax.
Lewis' Goods at Factory Prices.
SPECIAL DISCOUNTS given on all orders before the rush season.
C. M. SCOTT & CO.
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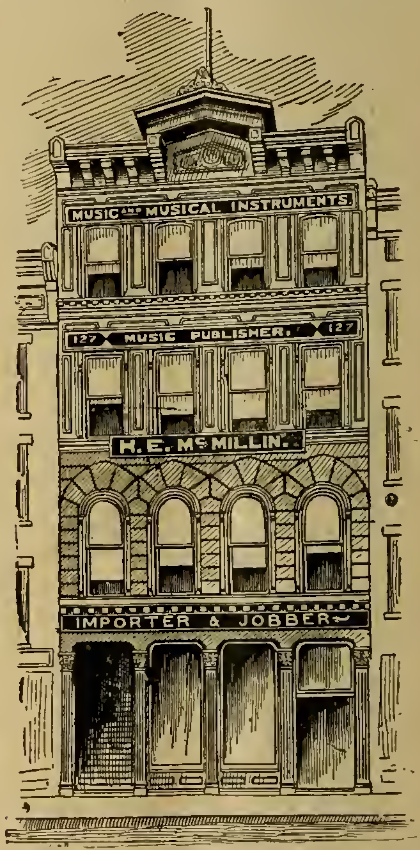
Send for Our 1904 Catalog and Price-List.
OUR HIVES AND SECTIONS
Are Perfect in Workmanship and Material.
By sending in your order NOW, you will SAVE MONEY, and secure prompt shipment.
We will allow you a cash discount of 3 percent on orders sent in during January.
PAGE & LYON MFG. CO., New London, Wis. U.S.A.

mies of bees from the edges of the frame without any qualms of feeling other than enough to cause him to seek methods of handling such frames so as to reduce this killing to a minimum.

I have trailed out this reply too much, but wish as a parting shot to say to Mr. Learner that he has misinterpreted my "one and a half advantages". The "closed-end" has many advantages, and of all of these only one and a half are possessed by the "Hoffman".

It may interest you to have me state that I looked into my observatory hives to-day and



A MUSICAL NOTE.—Twenty years of successful business with a record of continuous growth and expansion certainly signifies something. It means that merit and fair dealing must have been back of every transaction. Twenty years ago there was established in Cleveland, Ohio, a music house, by a practical music man with a fixed determination to build success strictly on QUALITY. To sell only the highest class of goods at as low a price as such goods could possibly be sold for direct to the customer, with only one small profit from maker to user.

Being a practical man he knew that Musical Instruments cannot be judged from the outside. Their merit is on the inside, and unless made with care will be without quality, while they may look all right. His success and the fact that he daily receives cash orders from all over the world proves that his instruments are made with the case that is required to give them true musical quality, as well as handsome appearance.

H. E. McMillin, Cleveland, Ohio, manufactures, imports and retails "EVERYTHING MUSICAL." Therefore his customers get the goods direct from headquarters, with the guarantee that they will be just as satisfactory as if the customer came direct to the store and made his purchase in person. Mr. McMillin looks back over his twenty prosperous years with pardonable pride, and forward to the future for a continuation of his business. His numerous customers always have a good word for his house. Mr. McMillin makes it a point to have every customer a pleased, satisfied customer. Write to him for catalogs of anything you may need in the music line, and you will readily understand why his business has grown to such proportions. Please mention the American Bee Journal when writing.

A SOLID FOUNDATION
MEANS
A SOLID HOUSE.

DADANT'S FOUNDATION
MEANS
Solid, Straight, Well-Built Combs.

110,000 Pounds Used by Bee-Keepers in 1904.

Satisfaction Guaranteed. Bee-Keepers' Supplies OF ALL KINDS.

BEESWAX WANTED at all times.
Send for our 1905 Catalog.

Dadant & Sons
HAMILTON, ILL.

TREES THAT GROW
Hardy varieties; yield big crops. Grafted Apple, 4½c; Budded Peach, 3½c; Black Locust Seedings, $1 per 1000; Concord Grapes, $2 per 100. We pay the freight. Catalog, English or German, free.
GERMAN NURSERIES
Carl Sonderegger, Prop.
GERMAN NURSERIES
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STANDARD
Poultry AND....
Bee SUPPLIES
The best of everything for the poultry and bee-keeper.
Freight Rates from TOLEDO are the Lowest
BIG DISCOUNTS FOR EARLY ORDERS.
60-page Illustrated Catalog will be out Feb. 1. Send your name for one.
GRIGGS BROS,
521 Monroe Street,
TOLEDO, - OHIO.
4A23t Please mention the Bee Journal.

could see only one dead bee in one hive, and none in the other. In the closed porch outside the entrances were 15 dead bees. These bees have not flown since Nov. 19. What does this say for wintering bees in observatory hives? ALLEN LATHAM.

New London Co., Conn., Feb. 10.

Controlling Bee-Paralysis.

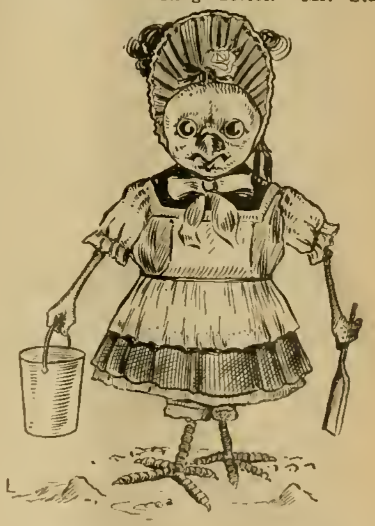
The report of the 35th annual convention of the National Bee-Keepers' Association held at St. Louis is a good one, and I read the report on bee-paralysis with much interest. I think I can throw a little light on keeping the disease under control.

Late in October, 1902, I found a bee-tree. The bees were 2 and 3 banded, and I transferred them into a movable-frame hive, and fed them up well. They came out in spring in good condition, and I increased them to 5 colonies. All 4 of the queen's daughters produced paralytic bees, and the old queen's progeny showed symptoms of the disease. Although the malady was hardly noticeable in spite of the immense number of bees dying at each hive-entrance, they went into winter quarters in good condition, and all came out fair colonies in the spring. One of them dwindled to nothing a month after being put out. The grass would be full of dying bees, and they would crawl out of the hives, some of them to die, and others would lay around the entrance on their backs for hours, with their legs quivering.

Just as soon as I could get queens I requeened the other 3 colonies, having for queens daughters of the old paralytic queen, before they got to rearing drones.

I allowed the colony containing the old paralytic queen to swarm once, hiving the new swarm and queen on the old stand. I put the parent colony on a new stand, and cut out all queen-cells and drone-brood, giving them a queen-cell from a healthy colony. The old queen being a very prolific one, I did not like to kill her, although she perished the

THE LITTLE WEATHER COCK.—This is the very appropriate name that Mr. Geo. H. Stahl has given to an entertaining, interesting little novelty which he will send free to any of our subscribers. It is a very fetching and saucy looking little rooster, so dressed that the color of its clothes foretells the weather—dry, wet or changing. It is a scientific weather forecasting device. Mr. Stahl



will send one free to any of our subscribers who will write to him for it, enclosing six cents for postage and packing and mentioning this paper. He will also send one of his new, large, illustrated Catalogs of the famous Excelsior Incubators and the Wooden Hens, which he has manufactured for the past twenty years. His advertisement will be found elsewhere in this paper. Address GEO. H. STAHL, QUINCY, ILL., and do not forget to mention the American Bee Journal when writing.

following winter with her colony. I have seen nothing of the paralysis since I got rid of those bees.

I don't believe bee-paralysis is a contagious disease, but I do believe it is hereditary. I would advise any bee-keeper who has the disease running through his apiary to requeen all colonies with queens which he knows are free from the disease, and mated to drones that are also free from it.

FRANK STOFLET.

Wood Co., Wis., Feb. 2.

Disposing of the Honey Crop at Home.

On page 51 expressions are called for from those who have been successful in selling their crops of honey in the home market. With the exception of one year I have sold mine at home for 30 years. The comb honey I sell at 10 cents per pound, the chunk honey at 9 cents, and the extracted at 8 cents.

My crop for 1904 was 1500 pounds, the least I have ever harvested. The most for any year was 4000 pounds. I aim to keep 35 colonies.

There are so many ways to begin that I can't explain all of them. The one I practiced most was always to have samples of honey with me, and not miss a chance to have people taste it, especially the children, for they almost always want more. Now, after 25 to 30 years those same children have homes of their own, and still have a taste for honey, and don't forget where to get it.

To illustrate: Years ago one little girl asked a good many questions about honey, and insisted on her folks buying once in a while. She is now married and lives in Kansas. Every fall she sends an order for honey, and knows just what to ask for. I have many such customers all through interesting the children.

Beginners sometimes think that the trade must all be worked up in one year. It is important to remember that it takes time, with lots of vim and push, to be successful.

As to packages, my standard for comb is 5-section cases (4¼x4¼x1⅞), always sold by the pound or by weight; for chunk honey 3-quart pails which hold about 10 pounds, and extracted in 3-quart pails holding about 10½ pounds. One should know what kind of packages best suit his class of customers, and how to put them up, and must keep everything clean and neat. J. H. SHEDENHELM.

Iowa Co., Iowa, Feb. 2.

Selling Small Honey-Crops in the Home Market.

As I have not written to the "Old Reliable" for some time, I would like to give my experience in selling small honey crops in the home market, called for on page 51.

I began keeping bees in 1895 with one colony, which I have increased to about 60. I have buckets that hold 10, 25, and 50 pounds, respectively. I do not take the honey on the street in large quantities to sell it, but I take orders from house to house, then fill the orders and deliver them later. In this way I can sell more honey and give better satisfaction than in any other way. I guarantee every pound of my honey, and agree to refund money for any that is not as I represent it.

I talk bees and honey whenever I have an opportunity, and exhibit bees at the county "Trades' Day". I have taken every premium on bees, wax, and honey that has been offered there since the Trades' Day was organized. Why? First, because I keep the best bees; second, because I have the best honey; and, third, because I take more pains with my apiary than any other man in this county. I show the bees and honey to every one who comes to the house, and in this way they become interested.

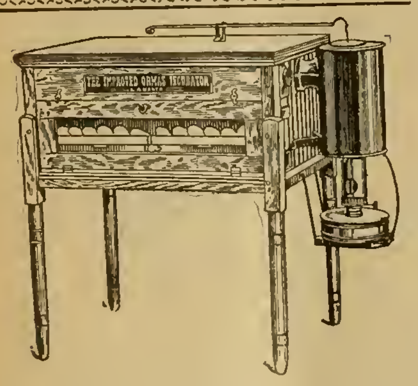
I have the 5⅜-inch deep extracting-frame, and use the Cowan extractor, No. 17. When filling orders, after having extracted some honey, I fill the buckets just as full as I can with comb, and then let enough extracted honey run in the pail to cover the comb. Then I put 2 or 3 sheets of nice paper over the honey, put on the lid, and the honey is ready for delivery; and when I reach the customers' homes the honey is just as nice as it was when I left home. I sometimes open a bucket and let people see and taste of it, and thus make satisfactory sales. Sometimes I get a new order from a lady who may be visiting where I am delivering the honey.

I can not produce enough honey to supply my trade, and orders are coming in from other cities. I sell it at home for 10 cents per pound, but when I take it to the market I charge 12½ cents in small quantities. When 50 to 100 pounds are taken, I sell at 10 cents per pound.

Bee-keepers are doing harm here by not working together. Some of them bring nice honey into town and sell it for whatever price the merchant will offer for it. Then there are others that take no special interest in the bees, and bring old black combs to the market which will discourage one from ever wanting to see any more honey. These are some of the things that I have to contend with.

M. H. SOSSAMAN.

Franklin Co., Ark., Jan. 30.



SCIENCE VS. NATURE.—Among the many enterprises connected with the large and ever-increasing poultry industry of the country, perhaps none is of greater importance than the manufacture of hatching machines, or incubators, as they are commonly called. The brains and inventive genius expended in perfecting the practical utility of these machines is evidenced by the surprising results which some of them achieve. In fact, such a close approach to natural conditions combined with commercial practicability has been attained that the "settin' hen" has been almost crowded out of business, even among the smaller poultry-raisers, while among the larger farms artificial incubation has reached huge proportions and is used exclusively. To meet these demands many different machines are offered, each claiming peculiar merit. Among these the Ormas Incubator, manufactured by L. A. Banta, of Ligonier, Ind., occupies a prominent place. The Ormas line, which includes Brooders also, are models of scientific efficiency and judging from the testimony of those who use them, give good satisfaction. Mr. Banta sends a beautifully illustrated catalogue, containing full description and prices, free to all who request it. Please mention the American Bee Journal when writing. Address, L. A. Banta, Ligonier, Ind.

CONVENTION NOTICE.

Utah.—The Utah Bee-Keepers' Association will hold its spring convention in the Mayor's Office, City and County Building, April 7, at 10 a.m. All are invited. Matters of great interest to bee-keepers, and horticulturists will be considered. Cache Valley's experience of killing the bees by poison spraying in the bloom must not be repeated. Jot down your thoughts on this or any other question, and bring or mail the same.

G. E. GARRETT, Sec.

E. S. LOVESY, Pres.

EDGE-DROP
SEED CORN
"Edge drop" planters are no good unless the seed is of even size and perfect shape. I breed corn with perfect and uniform kernels and I grade all my shelled seed with a specially constructed mill that throws out every uneven, round or thick kernel better than you could possibly do it by hand. Every kernel must be just like every other—even, flat, just right. That means even, accurate planting and a perfect stand. No trouble, no delay All my shelled seed is screened this way, a feature no other seed man can offer. Samples and catalog free.
Henry Field, Seedsman, Box 50, Shenandoah, Iowa
"The ear seed corn man."

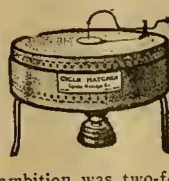
PROGRESS
I publish and recommend to you **THE RURAL BEE-KEEPER,** the best all-around 50-cent monthly bee-journal in America. On trial 3 months for this ad. with 10 cents. Clubbed with this publication both for one year for $1.25; or send us 25 cents for a 3 months' trial and your name and address on a 2-line rubber stamp; self-inking pad, 25c extra. Or send $1.00 and get The Rural Bee-Keeper and an Untested Italian Queen-Bee. Sample copy free. Agents get liberal terms.
Putnam Makes Good Bee-Hives
And sells them at reasonable prices.
New catalog now ready. Address,
W. H. PUTNAM.
Dept. 50-C. River Falls, Wis.
1Atf Please mention the Bee Journal.

For Queens SEND TO JOHN W. PHARR Berclair, Tex.
□ He will furnish at same prices as last year: Tested, $1; Untested. 75c; 5 for $3.25; 10 for $6; 15 for $8.25; 25 for $12.50; 100 for $45. He breeds Goldens, Carniolans and 3-Band Italians. Also 1, 2, and 3 frame Nuclei, and full colonies. Prices given on application. Pharr pays the freight, and guarantees satisfaction on all Queens. To do justice and judgment is more acceptable with the Lord than sacrifice. —(Prov. 3: 21.) 6Atf

Wanted Man 20 to 30 years old capable of taking charge of an apiary of 200 colonies. Can give employment balance of year collecting and soliciting for lumber and coal. In answering give reference and salary expected. TRESTER SUPPLY CO. LINCOLN NEB
6Atf Please mention the Bee Journal.

A 20TH CENTURY WONDER.—The Cycle Hatcher, a metal machine for hatching chickens, is styled a 20th Century Wonder. It embraces features not found in any other machine and is a new departure in the incubator world. It was designed to take the place of the hen, and is offered as an improvement over wooden machines, embodying principles that cannot be attained with a wooden construction.

Being made entirely of metal and asbestos it is absolutely fireproof, will not swell or shrink, and is not affected by varying conditions of atmosphere, as wooden machines are. It is the result of years of experiments conducted by a practical poultryman with an ambition. His ambition was two-fold; he wanted to make a metal machine that would get nearer to the mother-hen conditions in the hatching process, and then he wanted to be able to sell that machine for $5.00. Five dollars is a nice, easy price to pay; it's even money, and, while it don't leave the manufacturer much profit, he figured that people could afford to buy several of them. In fact, his experience with hatching machines convinced him that three 50-egg incubators were better than one with 150-egg capacity. His reasons for this are interesting, and fully set forth in the catalog advertising his machine.



The Cycle Hatcher, sold for $5.00, is a complete machine, and includes everything necessary to hatch eggs but the oil. It is made by the Cycle Hatcher Company, of Salem, N. Y., who would like to place a copy of their new catalog in the hands of every poultry-raiser and everybody interested in hatching chickens. They will send it free to all applicants; simply mention the American Bee Journal when you write.

Bee Supplies

Guaranteed Superiority!

Lowest Prices

We have been making Bee-Hives, Sections, etc., for over 20 years.

New .. Illustrated .. Catalog free; also sample copy of

The American Bee-Keeper

(Monthly, 50 cts. a Year.)

The best magazine for beginners. (It has been published by us regularly for 15 years.)

Address,

THE W. T. FALCONER MFG. CO.,

JAMESTOWN, N. Y.

FIGHTING WAS KEEN.—St. Louis, Dec. 1.—"The friendly competition" entered into by the world's manufacturers at the Exposition has turned into a regular free-for-all fight, and its fury has centered around the typewriter award, which was finally decided today when the Exposition officially awarded the Oliver Typewriter the gold medal as a mark of its practical superiority. Each exhibitor presented a score of claims why he should get honors as against all comers, and the competition became so keen that each firm felt the entire standing of their business was tied up in the receipt of the prized medal. All the typewriter exhibitors being American, they displayed a spirit of Yankee fight that made decision hard. Some of them even went so far as to anticipate results, and announced several weeks ago that they had won in the contest, though the official award was only made today, and as a result the Oliver Typewriter people are being congratulated on winning a great victory.—Special to Chicago Evening Post.

DEATH TO LICE.

LOSS BY LICE

on poultry amounts to many times the cost of **Lambert's Death to Lice**—the sure preventive. Loss can be saved and profit made by its use. Frees sitting hens from lice without harming eggs or chicks. A trial 10c box will prove it. 100 oz., by express, $1.00.

O. K. STOCK FOOD CO.,
D. J. Lambert, Vice-Pres.
406 Monon Bldg., Chicago, Ill.

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Headquarters for Bee-Supplies

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COMPLETE STOCK FOR 1905 NOW ON HAND.
FREIGHT RATES FROM CINCINNATI ARE THE LOWEST,

ESPECIALLY FOR THE SOUTH, AS ALL FREIGHT NOW GOES THROUGH CINCINNATI.

Prompt Service is what I practice.
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☞ For prices refer to my Catalog.

C. H. W. WEBER CINCINNATI ...OHIO...

Office and Salesrooms, 2146-48 Central Ave. Warehouses. Freeman and Central Aves.

Honey and Beeswax

Chicago, Feb. 8—The trade in honey is still below the normal in volume with prices unchanged, except that the pressure on the part of the holders to realize is more urgent. Fancy white comb honey, 12½@13c; No. 1, 12c; off grades, 10@11c. Extracted, white, 6@7c, according to flavor, quality and package; anything off is lower; amber grades, 5½@6½c. Beeswax, 30c per pound, if clean and good color.

R. A. Burnett & Co.

Boston, Feb. 8.—Sales of honey still continue light, principally on account of the extreme cold weather which we are having. On account of the large stocks in hand, prices that we have quoted are shaded in round lots. Fancy white, 15@16c; A 1, 15c; No. 1, 14c. Extracted, from 6@7c, as to quality. Blake, Scott & Lee.

Kansas City, Jan. 9.—The demand for comb honey still continues light, as most of the retail dealers were stocked up on $2.25 honey before the holidays, two cars of which were sold here at that time. We look for a better market in the near future, and quote: Fancy comb, 24-section cases, $2.50; No. 1, $2.25. Extracted, white, per pound, 6@6½c; amber, 5½@6c. Beeswax, No. 1, 28@30c. C. C. Clemons & Co.

Cincinnati, O., Feb. 7.—Comb honey is now coming in more freely, and prices if anything have moderated a little. The sales made and prices obtained were for No. 1 fancy water-white comb, 12@13½c; single cases, 14c. Extracted is sold as follows: White clover, in barrels, 6½c; in cans, 7½@8c; amber, in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c.

C. H. W. Weber

Philadelphia, Feb. 8.—The market of all grades of comb honey continues rather weak and trading light, with a good supply on hand. We quote: Fancy white, 15@16c; No. 1, 13@14c; amber, 11@12c. Extracted, white, 7@8c; amber, 6@7c. Beeswax, 28c.

We are producers of honey and do not handle on commission. Wm. A. Selser.

Cincinnati, Feb. 17.—The demand for honey at the present time is like business—frozen. Nevertheless, we are looking forward to a brighter future. We quote amber extracted honey in barrels and cans at 6@6½c, respectively; white clover at 7@8c.

The conditions of the comb honey market are aught but encouraging, owing to the vast amount of Western comb honey that is being consigned at almost any price. We quote fancy white at 12@13c, with but few sales. Beeswax, 27c. The Fred W. Muth Co.

Albany, N.Y., Feb. 8.—Honey market dull this extreme cold weather, especially comb, which candies or granulates and cracks easily. We quote: Fancy white, 13@14c; No. 1, 12@13c; mixed, 10@11c; buckwheat, 10@11c. Extracted, better demand: Buckwheat, 6@6½c; while, 6@6½c. Buckwheat most in demand, as the Jewish people will have no other. Beeswax, 30@32c. H. R. Wright.

San Francisco, Feb. 8.—White comb, 1-lb. sections, 11@12 cents; amber, 8@10c. Extracted, white, 6@6½ cents; light amber, 4½@5½c; amber, 3¾@4¼c; dark amber, 3@3½c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

Market is quiet and easy in tone, especially for amber grades, stocks of which are fairly liberal, and include several lots of Hawaiian Island product. There is not much strictly choice water-white honey offering.

New York, Feb. 8.—The market is decidedly dull on comb honey and very little moving, with plentiful supply. We quote: Fancy white comb, 14c; No. 1, 13c; amber, 11c; dark, 9@10c. Extracted honey is in fair demand, and prices remain about the same. Beeswax steady and in good demand at 29c.

Hildreth & Segelken.

Wisconsin Basswood Sections

And Prompt Shipments

Is what we are making for our customers.

— **DOVETAILED HIVES AND SHIPPING-CASES** —

We carry a full line of SUPPLIES. Ask for Catalog.

THE MARSHFIELD MANUFACTURING CO., Marshfield, Wis.

Bees For Sale.

85 colonies, mostly pure Italians, Moore's strain. In 8-fr. dovetailed hives; hives as good as new. Must be sold before spring. Write at once if you want a bargain. Bees are in fine shape. No disease or foul brood.

H. E. JOHNSON, Graettinger, Iowa.

Please mention Bee Journal when writing advertisers.

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BEEWARE
WATERTOWN, LEWIS U.S.A.
MAKES THE FINEST

Send for Catalog
containing 88 pages devoted
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BEE SUPPLIES
Free for the asking.

BEWARE
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BEEWARE
WATERTOWN, LEWIS U.S.A.
MAKES THE FINEST

LEWIS' GOODS

ARE THE BEST IN THE WORLD

and cost no more than any other standard make.
Whether you receive them in the dead of winter or when your bees are swarming in the summer time they will always fit accurately.

Established
30 Years

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EVERYTHING
KNOWN TO THE
BEE-KEEPER

ANNUAL OUT-PUT
20 million
Sections

*

100 thousand
HIVES

1 1-2 Story Wisconsin Hive.

Supers arranged for 4¼x1⅞ sections. This is only one of the many styles of hives we carry which can be found in our Catalog.

* * *

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WHERE YOU BUY YOUR
BEEWARE
WATERTOWN, LEWIS U.S.A.
MAKES THE FINEST

G. B. LEWIS CO.
Watertown, Wis.

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American Bee Journal

OUR TOIL DOTH SWEETEN OTHERS

45th Year. CHICAGO, ILL., MARCH 2, 1905. No. 9.

MASSACHUSETTS AGRICULTURAL COLLEGE.

R. A. MOROAN.

(See page 164).

Apiary of F. C. Smith & Son, Pierce Co., Wis.

Dr. D. R. Emmons, of Champaign Co., Ohio, Holding a Swarm.

South Dakota
Honey

Clay Co., South Dakota, Fair Apiarian Exhibit, shown Sept. 20, 1904.

Home Apiary of E. E. Butcher, of Bent Co., Colo.

Correspondence Course in Bee Culture.

Last fall we announced this course and made a special offer to students for early enrollment. We have secured quite a number of students, but nearly every one of these wants to continue his own bee-keeping so that we find ourselves without a sufficient number to recommend to parties wanting help in their yards.

We have inquiries now for help from a number of States—California, Colorado, Florida, Idaho, Illinois, Pennsylvania, Michigan, and other States. See what one of our students says:

THE A. I. ROOT CO., Medina, Ohio. LA COSTA, TEXAS, Jan. 28, 1905.

Dear Sirs:—I am very grateful for the 1905 edition of the "A B C of Bee Culture". I am highly pleased with your instructions in your Correspondence Course. It brings out points the amateur could never find by reading bee-books as it gives the essential parts in rotation so to explain them understandingly. It is like having a teacher or trying to study off-hand. Saving so much time and getting the foundation started right is half the battle. I hope to be an expert bee-keeper some day. Should I fail I certainly could not blame you. Everything bearing your name is first-class. May you ever prosper and live long to instruct us. With best wishes, Yours truly, W. R. HESSKEW.

Send for our prospectus, or, better still, send us your order with $10.00, for which we will send you:

Complete Course of 17 Lessons.
Gleanings in Bee Culture 1 Year.
1 A B C of Bee Culture.

We give in addition personal answers to as many questions as the student desires to ask, either on bee culture, locations, help, honey markets, or, in fact, any subject relating to bee-keeping. We know where many good locations are yet untouched; where the good honey markets are; who is needing help, and hundreds of other things that the bee-keeper wants to know. We can't tell you these things unless you ask. If you have hesitated to ask us, thinking we could not well afford to give time to answer your questions, enroll in our Correspondence Course. Never mind if you have been a bee-keeper for 20 years. If you do not need the lessons, the information we can give you by mail on a variety of topics will more than pay you. Let us show you one case:

A party became interested in bee-culture a few years ago and set about to build up a large apiary. He succeeded remarkably well, but paid little or no attention to the honey markets, his time being taken up with other matters. The third season he produced a very large crop of honey (150,000 pounds) and being unacquainted with the markets, he sent it for sale to a large city, to a house no more familiar with the honey markets than he. It appears that they sold it at any price they could get, for he told us later that the information we gave him of another market would have saved him over a thousand dollars on the one sale. (He hadn't asked us for it, but learning of the situation we wrote him, but too late; the sale had been made.) Perhaps the American Bee Journal readers think they would not be benefited. We assure you there are dozens of ways in which you can be helped.

Here is what one of our customers thinks of our "A B C of Bee Culture", which is included with the course:

"After looking through the 1905 'A B C of Bee Culture', just received to-day, I told Mrs. C. I would not take $25.00 for it if I could not get another copy.—P. F. CONKLIN, Elmira, N. Y."

The New Edition (1905) "A B C of Bee Culture" is $1.20, postpaid, if ordered alone.

And another customer speaks thus of Gleanings in Bee Culture:

DANVILLE, N. J., Dec. 12, 1904.

Dear Sir:—You ask if I have found "Gleanings" a good investment, and I can truly say the investment has not only been good, but very good. Although I do not keep bees for profit at this writing, but hope to at some future time, will say that I am trying to learn all I can about the subject, and "Gleanings" adds more ideas to my limited store of knowledge than any other publication I receive. All the departments treated in this semi-monthly paper are very interesting to me, and I get anxious to see its pages when the date arrives for its appearance.

Yours truly, RALPH P. FISHER.

Don't you think $10.00 is a small price for what we are offering you?

Gleanings (semi-monthly, 52 pages) is $1.00 per year if ordered alone.

THE A. I. ROOT COMPANY,
MEDINA, OHIO.

AMERICAN
ESTABLISHT IN 1861
THE OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL
Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor. CHICAGO, ILL., MARCH 2, 1905. Vol. XLV.—No. 9.

Editorial Notes and Comments

Advertising the Value and Uses of Honey.

We believe it was at the Denver National convention, in 1902, that the advertising of the value and uses of honey was first discussed publicly. Since then more or less has been said and written about it.

At the Wisconsin convention at Madison, in February, 1904, we read a paper on this subject, but it never appeared in print, for the reason that it was burned among other papers in the fire that swept away the office and factory of Secretary Dittmer. When Secretary Brodbeck invited us to furnish a paper for the St. Louis National convention, and to select our own subject, we quite naturally took up the honey-advertising question again, and tried to write as best we could on it.

The more we think on this subject the more we are convinced that the thing for bee-keepers to do in order to overcome the apparently stagnated honey market, especially in the larger cities, is to do some good advertising of honey. The fact is, most people are afraid to buy honey. They have so often read the infernal lies about comb honey being manufactured that they have come to believe them true. Also, they think that all the extracted honey found on the market is adulterated.

Now, what is to be done to counteract the effect of the misrepresentations about honey that have been going the rounds of the newspaper press for nearly 25 years? What can be done to get the great consuming public to regain confidence in honey? Our answer to these two questions is, ADVERTISE!

"Oh, but that will cost lots of money!" some one says. Surely, it will. But it will cost a lot more in loss by a continuation of the present low prices on honey, or no sales at all, than it will ever cost to put the advertising idea into effect.

What if 5000 or 10,000 bee-keepers should each pay $1.00 each (some would pay more) within the next 30 days, for the purpose of advertising the great value of honey as a food, in say two of the leading daily newspapers of New York, Chicago, Cincinnati, Boston and Philadelphia—don't you think the good effect would be felt very soon? We believe it would. And the newspapers that *advertised* the *truth* about honey would perhaps not be so likely to publish *false* statements about honey very soon.

We believe this is the "next move" on the honey-producers' checker-board.

Sugar-Feeding Among Bee-Keepers Denounced.

In the December number of the American Bee-Keeper Arthur C. Miller denounces sugar-feeding in such vigorous style as to warrant the editor in giving the sub-head, "Baneful Results of the Practice Forcibly Presented". Seven pages farther along in the same journal, L. E. Kerr, M. D., says, "All intelligent bee-men now rely to a great extent upon the sugar-barrel". Which raises a question as to Mr. Miller's intelligence; although he may console himself with the thought that "there are others" lacking in intelligence in the same way.

One part of Mr. Miller's argument that may well be pondered, reads as follows:

> Suppose it is possible to so feed the bees that all of the syrup is consumed and that none of it goes into the surplus; the average consumer won't believe it. It may be said the consumer does not know. Perhaps not in many cases, but he does in others, and suspects all. Then if he asks the bee-keeper what is the result? We know that the small amount of syrup that gets into the honey from stimulative feeding (when this is carefully and honestly done) is small indeed. But there are the looks of the thing, and the name of it, and such a name does not react to our advantage.
>
> But none too few among us are careful with stimulative feeding, and as for fall feeding they crowd the brood-chamber with food. Any one who is familiar with the various feeding systems advocated is well aware that most of them afford ample opportunity for some of the syrup to get into the honey. If there is a probability or a possibility of any being there, then the bee-keeper can not honestly say that his honey is absolutely pure. And until we can say that, we can not raise our hands or voices against others who buy our honey and then add more syrup of some kind.

Do Bees Starve or Freeze?

Entire unanimity as to the answer is lacking. There are some who are very positive that a colony of bees never dies from cold, and it seems that a diametrically opposite view is also held. C. H. Oldham, in the British Bee Journal, asserts, as a fact, "that when bees have consumed all their winter stores, they do not die of starvation, but of cold". As proof of the assertion, he says that on a number of occasions during the past year he has found bees apparently dead, their stores all gone, yet upon warming them up they revived, and were all right after being fed. His argument seems to be that as feeding did not and could not restore them so long as the cold remained, it could not be a case of starvation; and as warming could and did revive them, it was cold that sent them into their temporary death—a death that would have become permanent if the cold had been continued.

Pear-Blight and the Bees.

A paper upon "Pear-Blight in Northern California", published in the Newcastle News, has been sent to this office by H. Vogeler. The writer, Prof. Ralph E. Smith, of the State University, paints a vivid picture of the terrible ravages of the disease, and wisely urges that thorough investigation of it be made under the auspices of the State. In the course of his paper he says:

> Infection takes place largely in the blossoms, whither the germs of the disease are brought by bees and other insects."

He quotes from a recent publication the following statement:

> "Spraying, fumigating, and all other external remedies are utterly worthless, as the disease is in the sap-wood of the tree, protected from all external influences."

In this statement he thinks too much is taken for granted, and proceeds to argue in favor of the possibility of efficacious spraying after the following fashion:

> "If, then, we may well ask, the disease is 'protected from all external agencies', and its germs on that account not to be reached by any spray or similar treatment, how does the honey-bee obtain such germs to carry to the blossoms? Why, then, if the germ of pear-blight is accessible to the honey-bee, is it so certain that a proper

spray, at the proper time, might not reach and destroy the same source of infection?"

The gist of the argument is this: The disease is brought by bee and conveyed through the blossoms; therefore timely spraying of the blossoms must be of value in combating the disease. That is, the guilt of the bee is assumed as a fact, and the efficacy of spraying is sought to be built upon that fact. But is it not possible that the facts are the other way? Has the guilt of the bee ever been proven? Is it anything more than a theory? Is not the failure of spraying the fact? Has not spraying been tried, and has it not failed?

The following argument is commended to Prof. Smith: There has never been any direct proof that bees convey the disease through the blossoms, and the fact that spraying as a remedy has been found worthless is proof that such conveyance of the disease by the bees is not possible.

Preservatives Not Allowed in Honey.

We find the following paragraph in Gleanings in Bee Culture, which we think every bee-keeper should read and heed:

> PRESERVATIVES NOT ALLOWED FOR PREVENTING GRANULATION.
>
> Dealers over the country should understand that putting small quantities of preservatives such as salicylic or phosphoric acid, or even glycerine, in honey to keep it from candying will, in all probability, cause it to be classed by chemists and food commissioners as adulterated, and subject the seller of such goods to a fine. One such case occurred this summer, where a dealer put a small quantity of phosphoric acid in honey—not to adulterate it, he said, but to keep it in a liquid condition. Whether it would or not I do not know, but the pure-food commissioner got hold of a sample of this, had it analyzed, and the dealer was notified to discontinue the sale of all such honey, which he did. If preservatives were permitted for the purpose of preventing granulation this might open the door wide to fraud; and it is well, perhaps, that the commissioners and chemists should declare that all such honeys be classed as adulterated.

It seems to us that bee-keepers, above all others, should not indulge in adulterating honey. It is better to educate the public to know that pure honey *will* granulate than to mix some foreign substance with it in order to try to prevent natural granulation.

Miscellaneous News ✣ Items

Secretary Geo. W. Brodbeck, of the National Bee-Keepers' Association, passed away in Los Angeles, Calif., on Feb. 6. He had been sick for some months, as most of our readers know. We hope soon to publish a biographical sketch of our departed friend and brother.

* * *

To Our Foreign Subscribers.—It seems necessary at frequent intervals to inform our foreign subscribers—those not entitled to domestic postal rates—that none of the special offers we make in the American Bee Journal or elsewhere apply to them. Hence, whenever we get such order from foreign countries, with a remittance, we always apply it *all* on subscription, which is at the rate of $1.50 a year to most foreign countries. If foreign subscribers would just stop a minute to think, they would see that none of our domestic offers apply to them on account of the extra foreign postage. So by applying on subscription all the money they send, they get full value in return even if they do not get a queen, knife, or some other things we sometimes offer to those living in this or other countries enjoying domestic postal rates.

* * *

The Home Apiary of E. E. Butcher (or at least a corner of it), of Bent Co., Colo., appears on the first page. In 1893 there were 135 colonies in this apiary which produced 17,000 pounds of honey, and in 1904 there were 205 colonies which produced 4000 pounds—only about one-fourth of a crop.

* * *

R. A. Morgan and the Clay Co. (So. Dak.) Honey Exhibit.—The picture of the bee and honey display at the Clay Co., So. Dak., Fair, held on Sept. 20, 1904, was sent us by Mr. Morgan, whose picture also appears on the first page. Mr. Morgan was superintendent of the exhibit, and is the vice-president of the South Dakota Bee-Keepers' Association. He was on the grounds during the Fair, giving the visitors, both young and old, a taste of some fine extracted honey which was put up by himself in 1882, and which had been exposed to all kinds of weather and conditions, and was still very nice.

Mr. Morgan is 49 years of age, and has been in the bee-business since he was 13. He owned and operated 400 colonies of bees for 5 years in Southern Wisconsin, but went to Dakota 19 years ago, at which time there was not a head of clover to be found, and he has lived to see the southern part develop into a beautiful clover-producing section. Mr. E. A. Morgan, of Wisconsin, a brother of R. A., has lately joined him, believing that there are greater possibilities in South Dakota for bee-keeping than in Wisconsin.

Referring again to the honey display, there is shown a large pyramid of choice white clover honey near the center; to the left is a pile of choice white honey and dark fall honey. On the right are two single-comb observatory hives with queens, bees, drones, queen-cells, honey, and bee-bread. On the sides and top of the pyramid may be seen a fine display of extracted honey in glass jars, put up during the past 22 years. On the right of the exhibit is a honey-extractor. At the back of the honey display is a complete dovetailed hive, bee-smoker, honey-knife, veil, bee-brush—in short, everything needed in the apiary. The whole was draped in white and red bunting, and over all was the large inscription shown in the picture.

* * *

The Apiary of F. C. Smith & Son, shown on the first page, is thus written about by the "Son" of the firm:

> PIERCE CO., WIS., Jan. 27, 1905.
>
> DEAR EDITOR;—As pa and I are in the bee-business I thought I would report about our apiary. My pa's name is F. C. Smith. We have 105 colonies in the cellar, which gave us 6350 pounds of very fine honey last year. We extract it so the bees lose no time in making comb. We sell it at 10 cents a pound, or a 12-pound can for $1.15.
>
> We started with one colony years ago. Not knowing anything about the work, we sent for the American Bee Journal, and that helped us out. We could not get along without it, for it is a big help to us.
>
> I am 15 years old, and can hive bees as well as anybody. I can walk among them without a veil, and barefooted. They do not very often sting me, and if they do by mistake, it does not swell and hurt as some folks say.
>
> I send a picture of our bee-yard and bee-house. The man you see is pa, and the little man is myself. FRED SMITH.

* * *

York Honey and Bee-Supply Co.—This seems to be the latest. Since Mr. H. M. Arnd purchased our interest in "The York Honey Co.", about a month ago, he has arranged with the G. B. Lewis Co., of Wisconsin, to handle their line of bee-keepers' supplies in Chicago. He has also moved from 101 E. Kinzie St. to 141 & 143 Ontario St., five blocks north of the Chicago & Northwestern railway passenger station, and will conduct his business under the name as given in the first line above.

Opinions ✣ of Some Experts

What is Honey?—Some Definitions.

Ques. 22—*What, in your opinion, would be a correct, concise and comprehensive definition of HONEY?*

WM. MCEVOY (Ont.)—I don't know.

JAS. A. STONE (Ill.)—The best of all sweets.

S. T. PETTIT (Ont.)—Nectar of flowers gathered by bees.

First the flowers and then the bees;
No honey on earth except through these.

The term "honey-dew honey" is quite injurious and uncalled for. "Honey-dew" is good enough for that article. See page 167.

C. H. DIBBERN (Ill.)—Nectar gathered by the bees from flowers.

R. C. AIKIN (Colo.)—Vegetable and similar sweets collected by bees.

N. E. FRANCE (Wis.)—Nectar of flowers and plants, gathered by bees and stored in honey-comb.

ADRIAN GETAZ (Tenn.)—The sweets from natural sources gathered and elaborated by the bees.

O. O. POPPLETON (Fla.)—The nectar of flowers after having been gathered and properly manipulated by honey-bees.

PROF. A. J. COOK (Calif.)—A reducing sugar in solution stored in comb by the honey-bee. This is the only possible definition. No one can know where the bee secures the nectar, which is changed by the bees to honey.

G. M. Doolittle (N. Y.)—Honey is the product of the bee from the saccharine matter as gathered from natural sources.

Dr. J. P. H. Brown (Ga.)—I would define honey: A saccharine matter secreted by flowers, gathered and manipulated by bees.

L. Stachelhausen (Tex.)—Honey is a saccharine matter of natural source, gathered, modified, and stored in the comb by honey-bees.

Rev. M. Mahin (Ind.)—A sweet, thick fluid manufactured mainly from the nectar of flowers by the bees and deposited in waxen comb-cells usually in hives.

E. Whitcomb (Nebr.)—Nectar gathered by bees, stored and evaporated by the general process until it will keep after being sealed over by them. Otherwise it is not truly "honey".

C. Davenport (Minn.)—Certainly nectar gathered by bees from flowers and plants. Perhaps it should be broader than this. and include any sweet liquid gathered by bees from flowers, plants, and trees.

Arthur C. Miller (R. I.)—The nectar of flowers, converted, thickened and stored by the bees. Possibly it might be well to add "sealed", as often unsealed "honey" is little more than raw nectar.

Eugene Secor (Iowa)—A sweet, watery fluid gathered by bees from various natural sources, chiefly from the nectaries of flowers, deposited by them in honey-comb cells, and ripened to the proper consistency.

P. H. Elwood (N. Y.)—Honey is that saccharine part of vegetation stored by the honey-bee—principally the nectar of flowers, with the larger portion of the cane-sugar changed to grape sugar in the process of storage.

R. L. Taylor (Mich.)—Honey is a saccharine, viscid substance made by bees, by evaporation and other manipulations, from sweetish liquids already gathered from different sources, but chiefly from the nectaries of flowers.

G. W. Demabee (Ky.)—Honey is the nectar of flowers (vegetable bloom) gathered, stored and evaporated to proper consistency by honey-bees. All "scientific" talk about "*digested* nectar" is *undigested* delusion, as I have proven to my own satisfaction by practical experiment.

Morgan Bros. (S. Dak.)—1. Nectar from flowers gathered by honey-bees, manipulated by them, and stored in their combs and sealed. 2. A sweet liquid substance gathered from the blooms of plants by bees, manipulated by them only, and stored in combs and sealed as its final treatment.

Dr. C. C. Miller (Ill.)—That's a tough one. It should include all sweets gathered from flowers and other parts of plants, and possibly should be more inclusive than that; and it should exclude anything fed directly by the hand of man except honey itself. To put that in a concise definition is beyond me.

C. P. Dadant (Ill.)—I hold that the only true way to look at this matter is from the standpoint of the honey-producer who harvests what the bees gather. Nothing fed artificially to bees can be properly called honey, unless it *was honey* when fed. But of the crops harvested naturally by the bee, we should be very careful in rejecting anything, even if it is of low quality. See page 166.

E. D. Townsend (Mich.)—Nectar from whatever source, principally of flowers, and such other sweets as bees collect from *natural* sources; digested through the process of evaporation, in the condition as to body and flavor that it is usually sealed by the bees. Anything extracted prior to this stage should be sold under another name. This answer is not scientific, but from a practical bee-keeper's standpoint.

Mrs. J. M. Null (Mo.)—Did not Dr. Miller, on page 89, offer to receive "sealed proposals for a satisfactory definition"? Why not unburden the problem upon his shoulders? More especially as he is considered authority, and since he has offered about all there is to offer, what right have we to show up our frailties? I must confess those words "correct, concise and comprehensive" just about corner me. How would "concentrated sweetness" do?

Jas. A. Green (Colo.)—Honey is the liquid gathered by bees from natural sources and stored in their combs. This may not be narrow enough to suit the chemist, but the bee-keeper can not afford to have the line drawn any closer. If honey containing honey-dew, fruit-juices and the extra-floral secretions of plants is declared impure, there is not a bee-keeper in the land who might not at some time be brought before a court of justice on the charge of selling adulterated honey.

E. E. Hasty (Ohio)—A delicious, edible sweet, from flowers and other natural sources, gathered and elaborated by bees. This wording cuts off all unedible, poisonous and ill-tasting stuffs, even though bees were guilty of collecting them. It also cuts off the sweets resulting from feeding, except when the substance fed is honey to begin with. It "splits the difference" on honey-dew, letting in the good and shutting out the bad. It would be better to let in everything that can claim to be honey than to try to rule out any pleasant tasting sweets that bees gather without feeding. A wrong definition of this kind would make us all evil-doers and law-breakers in spite of ourselves.

E. S. Lovesy (Utah)—Honey is a nectar gathered by the bees from the flowers, and the only thing that will produce nectar in the flowers is atmospheric conditions. Through the action of the dews this nectar becomes a watery substance, though sweet, and the honey-bee is so created that the liquid passes through what is known as the tongue into the stomach of the bee, where it is digested. Then it passes into the honey-sac and is carried to the hive and deposited in the cell, where it goes through the process of evaporation and is thoroughly ripened, after which it is hermetically sealed by the bees. In this state it will keep for an indefinite period.

✢ Contributed ✢ Special Articles

No. 3.—Bee-Keeping in the Southwest.

BY LOUIS H. SCHOLL.

[Continued from page 118.]

In my previous article nothing was said about the various methods of management practiced by some bee-keepers to hasten the building up of the colonies in early spring, such as stimulative feeding and spreading brood. Of these, the latter has been tried thoroughly, while stimulative feeding has never been practiced in my yards, as a slow honey-flow that we have early in the spring in my locality can not be improved upon by feeding.

SPREADING BROOD NOT ADVISABLE.

The method of spreading brood in the spring was tried thoroughly in my own apiaries a number of years ago, but was discontinued. It may work to advantage in other localities, and especially in the North, where the colonies need crowding on account of the shortness of the season, but in our Southern apiaries, at least, I do not think it advisable or advantageous.

In my manipulations with the bees it has never seemed necessary to interfere with the progress of the colonies except in a few instances, and with a few colonies when a change of the combs was of advantage. In colonies that had in the brood-nest combs filled with honey or pollen which the bees were slow in removing, and having empty combs on the outside, perhaps it paid to shift them. This must be done with care, however, placing the combs on the *outside of the brood-nest* in the early spring, as it is of the utmost importance to keep the brood-nest in as compact shape as possible. Later in the season an empty comb may be inserted by spreading the brood-nest, and always placing it between two combs of sealed and hatching brood, so that the order of the brood-nest will be disturbed as little as possible. This the bee-keeper, and the beginner especially, should bear in mind if spreading brood is practiced at all.

PRACTICED ON A LARGE SCALE.

When managing over a thousand colonies of bees in nine different apiaries for one of our Texas bee-companies several years ago, I was compelled to practice the method on a large scale, and as this was after I had given up the idea in my own apiaries it afforded an excellent opportunity for noticing more closely the results of such practice.

The manner of procedure was as follows: Beginning with warm weather in February the colonies were examined for their condition, amount of brood and stores, and a record of this was made. Queenless colonies were either supplied with a queen or united with another colony. Weak colonies were united, and those short of stores were helped from stronger ones. Three weeks later another visit was made to all of the yards. The number of combs containing brood averaged about five, some of the strongest having seven. From these one or two combs were drawn and given to weaker colonies. Then the whole apiary was gone over and an empty comb was placed on each side of the brood-nest between the last comb containing brood and the adjoining comb of honey. In three weeks more this was repeated, but an empty comb was also placed in the center of the brood-nest between two combs of hatching brood. As soon as the lower combs were occupied with brood, the queen extended her egg-laying up into the shallow extracting super left on the year around.

Just before the honey-flow in April, all the combs with unsealed brood in the brood-chamber were placed on the outside of the brood-nest, and the hatching brood was shifted to the center. This provided the queen with laying room and prevented the storing of honey in the outside combs. Such manipulations put the colonies in an ideal shape for the honey-flow, but the many manipulations and the disturbance to the colonies caused by them seems to be unsatisfactory.

TOO MUCH WEAR AND TEAR TO THE COLONY.

There is no doubt that more brood is reared by colonies so manipulated. The spreading of the brood-combs and inserting empty ones forced the bees to enlarge the brood-nest, and the removal of the honey and pollen from the combs in the rearrangement of the brood-nest stimulated them. But while this may have been an advantage in that way, it, at the same time, was in a large measure a great disadvantage in a large amount of honey or stores being consumed, in a great waste of energy, and an unnecessary amount of wear and tear, resulting in a sacrifice of bee-life, a comparative depletion of the colony to the increase in numbers obtained, and leaving the colonies in no better condition, if as good, as when they are left alone. There is apparently no advantage gained when practiced in a wholesale way, for the extra labor and expense involved, even if it is done with care and sound judgment in the hands of an experienced bee-keeper. The difference is not great enough to warrant its practice, and as this was apparent to the members of the firm, the method of spreading brood was put out of practice.

COMPARED WITH THE LET-ALONE PLAN.

Colonies that were left entirely alone built up stronger and gave more surplus. A thorough test of this was made in a yard owned by two assistants in the employ of this same firm. The brood-nests were all in nice condition, with good combs and plenty of stores. The shallow extracting supers were left on the hives and provided room for enlarging the brood-nest and storing honey that was not needed in the brood-chamber below. The colonies spread their brood-nests in a natural way; they were not disturbed by unnecessary manipulations, and a good crop of surplus honey was obtained with a less amount of labor and expense.

Brazos Co., Tex.

[To be continued.]

What is Honey ?—Official Definition.

BY C. P. DADANT.

The official definition of the word "honey" has recently been submitted to one of the committees of the National Bee-Keepers' Association of which I am a member. This definition when once adopted will bar out anything else as adulteration. But the present proposal would bar honey-dew. I most emphatically sustain the views expressed by several bee-keepers when they ask that the so-called honey-dew be not excluded from the definition of the word "honey." The honey-dew in some sections is gathered by the bees one summer out of every four, at least, and is often mixed with other honey or nectar from the flowers, in such small proportion as to make it very injurious to the bee-keeper if the product had to be discarded. All honey-producers who are at all acquainted with the low quality of honey-dew recognize the fact that it must be sold as a very inferior article, but there are honeys harvested from the blossoms which are also low in quality. This honey-dew is a natural product harvested by the bees in the fields and woods, and it would be awkward, as well as unjust, to punish a bee-keeper who sold the natural product of the bees as honey, solely because it was honey-dew either in part *in toto*.

The laws of the country are for the protection of both the producers and consumers, and they cannot be too stringent on real adulterations, but they ought to protect and not punish the honest-producer. I have, myself, harvested tons upon tons of honey-dew—in one season as much as thirty barrels of it; I have seen it mixed with the finest white clover honey in all sorts of proportions; but although I recognize its inferiority, I feel that it is an absolutely legitimate product, and should be classed as inferior honey. There are many uses to which it can be put, and its color will always show its presence in any quantity; for that reason there is no need of fearing that any material injury will be inflicted on the consumers, who can readily ascertain that its flavor, like that of buckwheat or bonesct-honey, forces it in a third or fourth class position. Tobacconists, bakers, vinegar-makers, etc., can use these low grades of honey with more profit than any of the grades of glucose, the sweetening power of which is much below that of any grade of honey.

This matter is of some importance and should be thoroughly sifted by the bee-keepers.

Hancock Co., Ill.

Best Size of Hive for Bread-and-Butter Bee-Keeping.

BY E. D. TOWNSEND.

IT has been said that if you want to get the ear of a bee-keeper, and hold it, you must talk about hives.

In the first place, the majority of writers on the hive question are too positive in their assertions, or, in other words, they have had an experience in one locality, perhaps, with one or two styles or sizes of hives, and have worked out a system that fits their particular hive and location, so that it is a practical success in their hands. What is more natural than that they should cry "Eureka!" and grab their pen and write to their favorite bee-paper under the bold head-lines, "The Hive Problem Solved at Last"?

As I am in a liberal frame of mind to-day, I am going to allow that an experienced bee-keeper can get fair results with almost any known hive, in any location where there is nectar to be gathered, of either comb or extracted honey. Allowing this to be a fact, which I do not think many will dispute, one can see how easy it is for a bee-keeper who has had experience with only one or two sizes or styles of hive, to come to the conclusion that he, as good luck would have it, has adopted the only good hive, when, really, if he had started with some other good style or size of hive, he would have worked out a system that would fit his location so well that the results would have been about the same. As a person will get *fair* results from a hive that is ill adapted to his location or system, he is quite likely to change that word fair to *good* results, and plod on through his bee-keeping experiences, never knowing how much he has been handicapped by not adopting the hive his location and system required for the best results.

STUDY WELL YOUR LOCATION.

In the first place, study well your location, and the time your main honey-flow commences, whether you will produce comb or extracted honey, or, if you intend to operate one home yard, or several out-yards, where no one will be present to hive swarms that may appear at any time, especially would I caution you against taking the advice of any one who claims that his one size of hive is especially adapted to all these conditions, for the best results in the production of honey.

To illustrate: You may be getting the best results with the 8-frame Langstroth hive, with your system and location, in your home yard, but as soon as you begin to establish out-yards you might have to sacrifice the advantages of the 8-frame hive and adopt the 10-frame, on account of the swarming problem.

Then, the time your main honey-flow commences must be taken into consideration. I would use just as large a hive as would breed up and get full of bees so as to be in good shape to gather honey when the season opens. This size of hive is all right for either comb or extracted honey, in the home yard where some one will be present during the swarming season to take care of any swarms that may appear. In an out-yard for extracted honey, on the let-alone system, the hive should be somewhat larger to prevent swarming.

When I commenced the keeping of bees—in 1876—like many others, I suppose, I adopted the hive my neighbors used. In this case it was the 12-frame Gallup, with the then popular 1½-inch spacing of the brood-frames. After a few years I, mith many others, adopted the 1⅜ spacing. In my case it was very easy. As our hives were 18¼ inches long inside, all I had to do was to add another brood-comb to each hive, and it was done. With these 13 Gallup frames as a brood-nest, I have never found a hive that would produce more extracted honey than this would in this locality.

Later, as I began to establish out-yards, I found it more convenient to buy bees in Langstroth hives, mostly in the 8-frame size, so I had quite an experience with this size also. But the results were not quite as good as with the 13-frame Gallup hives. So when I commenced to build new hives, what would be more natural than that I should build the Gallup size, in the Langstroth style, which resulted in the 10-frame Langstroth? Then with my system of tiering up several stories high, to allow the honey to ripen thoroughly on the hive before extracting, the wide, shallow 10-frame Langstroth style makes a better proportioned hive than the narrow Gallup or 8-frame Langstroth.

Then for eight or nine years I had 10 Gallup hives with only 10 frames each. These, as you will notice, were still smaller than the 8-frame Langstroth—about 100 square inches of comb space less—and I got so I did not expect as much from these as from the larger hives. The brood-nest, after allowing the usual space for honey and bee-bread, seemed to be too small to breed up a normal colony. At any rate they never averaged as much surplus as the larger hives, and had to be watched more closely as to winter stores, etc.

Then, I have had some experience with larger hives. I bought and used, one season, 50 colonies in 12-frame Langstroth hives. While they did not produce quite as much surplus honey as the 10-frame, they had more honey in the brood-nest in the fall. They were cumbersome to handle, and previous experience with large hives that I am about to explain, had convinced me that the 10-frame size was the right size for this location. While I do not consider one season's experience with a certain hive as worth very much, still I give it for what it is worth toward determining the proper size of hive to adopt. But what has convinced me most, that the extremely large hive is not adapted to this location, is a 16-years' experience with 50 10-frame Quinby hives (except the last 6 years, when 25 of them were contracted to 8-frames by the use of a division-board on each side in place of the two outside combs).

These Quinby hives, like most of my others, are chaff hives, and all wintered with their full number of brood-combs, as with my present system of producing honey I do not handle any brood-combs of colonies that are in a normal condition. My practice is to give the same amount of labor to a larger number of colonies, or yards, rather than put a great amount of work on a less number; and since adopting this practice I have made a very much better success, financially, than with the old intense method. So you see, all our colonies have to winter on the same number of combs they have in summer. The results are, that bees in these large 10-frame Quinby hives (1800 square inches of comb space) do not winter and spring as well as those in the smaller hives, and our short, early, white honey-flow, coming as it does mostly in June, is usually one-half over before these large hives are full of bees and honey, ready to enter the upper stories. Thus the surplus honey is always below the average in these hives.

There is no question about these large hives breeding large colonies. If one were further south, where bees winter better, or, if our honey season were in July, the results might be much better. One thing is certain, with my location and management I can not afford to use this size of hive.

In conclusion, let me add: I have nothing at stake in this hive controversy, only the largest grade of honey produced with the least amount of labor and expense. We earn our bread and butter with the bees.

Mecosta Co., Mich.

✱

Something Further on Defining "Honey".

BY S. T. PETTIT.

TO question No. 22 (see page 164) I would say further: I am aware that, however desirable, it is all out of the question to draw the reins so taut. Honey-dew occasionally comes at all times, in warm weather, in season and out of season; sometimes when the honey-flow is off, and again when the flow is on. So, in some cases, it is impossible to keep the two articles separate. In such cases, if it is fit for table use we must sell it for what it is worth.

A few years ago, during white clover bloom, the clover yield was light, but honey-dew was plentiful. It was of bad flavor, but the color was good. The bees drew out the section-combs and stored quite a lot of honey-dew with a little clover; but they refused to cap it, leaving the sections about half full. Later on the basswood flow was fairly generous, and the sections were filled and capped, and my crop turned out pretty well, after all. Myself and others would have felt it quite a hardship if the law forbade us to sell that honey for what it was worth. So I conclude, in a commercial sense, honey is "what bees gather from natural sources".

When working at Ottawa, the Canadian Capital, to secure the passage of our Pure Honey Bill, I coined and used that term, and I never have seen any reason to change it, for, in a commercial sense, "Honey is what bees gather from natural sources".

Doubtless, we should keep the two articles—honey from flowers and honey-dew—as separate, in all respects, as possible. I can not see how any good can come from calling "honey-dew" "honey-dew honey". The term "honey-dew" is quite good enough for that article. I am not blind to the facts that some honey-dew is very nice indeed; but such is the rare—very rare—exception, in the great majority of cases.

Elgin Co., Ont.

Our ✣ Sister Bee-Keepers

Conducted by EMMA M. WILSON, Marengo, Ill.

Bees Wintered in a Shed.

I have 18 colonies of bees which I winter outdoors in a bee-shed. On each hive I put a super filled with maple leaves and packed well around them. When I put them away they weighed 50 pounds and over, and each hive had 8 frames in it.

1. Were 8 frames too many to leave in each hive over winter?

2. Should I lessen that number when I put them on the summer stands?

3. When should I put them on the summer stands?

4. Is this a good way to winter bees?

Lake Co., Ill. MRS. L. ANTES.

1. No.

2. No, there's no good reason for having any less than the full number of combs at any time of the year. Some have favored the plan of having less than the full number in winter, closing up what are left by means of a division-board. But we are told that European scientists proved by careful experiments that a comb was just as good as a division-board. That hardly seems possible, but, at any rate, the difference must be so little that it is best to leave the full number of combs the year around.

3. Better not disturb the packing any sooner than necessary; not till settled warm weather in May. And yet if you wait as late as that there will be trouble in moving them, for they will have marked their location in the shed, and will go back in numbers to that place. If the distance is not great that they are to be moved, you can overcome the difficulty by moving them a short distance each day; if that is not convenient, put them on the summer stands before they do much flying, perhaps the last of March or first of April.

4. If located so that strong winds can not blow into the entrances, they ought to do well.

A Wisconsin Foul-Brood Experience.

In 1899 my husband, who has been a bee-keeper for nearly 25 years, sold his bees, consisting of over 100 colonies, and went to Southern California, returning in 1903 and purchasing the same bees, or their descendants, from the man who bought them, a near neighbor, and a warm personal friend, Joseph Mathews, who was about leaving the neighborhood. The bees were in winter quarters at the time of purchase, and Mr. M. informed us that they, with the bees of several other apiaries in the vicinity, had been troubled with foul brood, but that Inspector France had been there and exterminated the disease, a fact which Mr. M. undoubtedly believed; but when the bees were taken from winter quarters, some 15 or 20 out of about 100 colonies were found to be badly diseased.

Inspector France was immediately sent for, and promised to come. After several months he came, arriving late at night and leaving early in the morning, saying it was too late in the season to do anything, and advised us to wait until spring.

In the spring he came again, staying about the same length of time, and giving a few instructions. In the meanwhile we had been getting all possible information on the subject, and proceeded to act accordingly.

The combs from the diseased colonies were cooked, and the hives cleansed, either by boiling or burning out, a near neighbor bringing his diseased colonies to be treated also, and the disease was apparently exterminated so far as the two apiaries were concerned.

Last fall 30 colonies were put into winter quarters, and a number of them showed foul brood. The question is, What good did it do us to treat our bees when the country around was full of foul brood? and would it have been so full of it if Inspector France had been at liberty to come sooner, stay longer, inspect more fully, and give more instruction as to the treatment?

Judging from short acquaintance, we found Mr. France a fine man, but it seems to the "foul-broody" people here (nearly all the bee-keepers belong to that clan) that he has "too many irons in the fire" to attend properly to his regular "knitting"; that is, if inspecting bees is his regular work.

My husband has just read what I have written, and wishes me to add that Mr. France told Mr. Mathews that 3 of the colonies were diseased, and promised to come and treat them, but failed to do so (that was after treating them, and he made a second call, as I understand it); but instead of 3 there proved to be some 15 or 20.

There is foul brood in a number of apiaries, ranging from 5 to 10 miles away in all directions, and unless it is exterminated the bees will soon be, and I think I am voicing the feelings of the most of the bee-keepers in writing to you.

A great deal of the foul brood is in small apiaries, where the owners care very little for the profit from them, and so do not try to get rid of the disease. If there is any way of compelling these people to try to get rid of foul brood, the bee-keepers here hope to see it speedily put into operation.

I will close by adding that I spent several years within 12 miles of Prof. A. J. Cook's home; that we have had the pleasure of seeing him, and listening to him speak, and that I could tell a very different story about typhoid fever, water, prosperity, and a plenty of work for willing workers, even the short distance of 12 miles away, than he tells on page 37. Not that I doubt him, but things are so "exceptional" in California, and I, perhaps, had a better chance to see some of the "exceptional" things than he has.

Waushara Co., Wis., Jan. 31. MARY B. HALL.

Inspector France has the reputation of being a very reliable and careful man, although perhaps overworked, and the probability is that he regretted as much as you the peculiar circumstances that prevented closer attention in that one instance.

You say, "If there is any way of compelling these people to try to get rid of foul brood", etc. If I am not mistaken, all that is necessary is to report to the State inspector such cases, and he will make it his business to see that they have proper attention, you being specially favored by living in a State whose laws give the inspector compulsory powers equal to those of a sheriff.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

TO SETTLE WHICH IS THE BEST HIVE!

And some more Prof. Scholl is going to "draw Jordan into his mouth". Give him a little time and he can *settle the question* which is the best hive! We laugh. But don't you mind it, Prof. S.; our laughter is not of the contemptuous kind. We dearly love the young investigator who magnifies his office, and gets now and then a little too hopeful. Hardly so well do we love the seasoned and humbled old chap, all the time too pessimistic. But you see we catch a sly glimpse of a theorem that says: Behold a thousand official professors settling the hive question; and presently behold a thousand different hives that they have settled us on! Corollary! One professor's settling is less confusing, *but not any more reliable.*

The truth seems to be that there are a great many very excellent hives possible to be made—economic difference between them to be expressed in quite small figures—figures so small that the "personal equation" (as scientists express it) upsets and obscures everything else. Also no one hive, and no five hives, could possibly be best for all persons, climates, circumstances, and objects in view. Page 26.

VARIOUS PROBLEMS TO BE INVESTIGATED.

To return to Prof. Scholl, he has an interesting lot of weighty problems on his memorandum: How to manage a distant out-apiary with the least work and loss. Some more whacking away at the tough job of making liquid honey stay liquid when it is put up. One kind of hive in the apiary, and the most profitable kind. Honey-vinegar to equal the best vinegar in the market, and be made with cheap honey. All inferior honey kept off the market and converted into wax by the bees. (The last, not the least.) In these problems we see a minimum of the academic inquiry, and a praiseworthy maximum of the dollars and cents. I'm old pessimist enough to fear that honey-vinegar from poor honey (or dirty washings) can never be made to hold its own in the market alongside the best cider-vinegar. He may try it, though.

As to making poor honey into wax, my advice would be, don't waste much time in small experiments that try to settle the wax-honey ratio beyond doubt—experiments that try to cut off all causes of error. Folks will doubt anyhow—and we get out of visible causes of error by getting into invisible ones twice as big. Be a little shy of all *small* experiments. Let the scale be large; and inquire, What does it *cost* for these 10 colonies to make 10 pounds of wax? Have another 10 colonies alongside, fed the same honey in the same way, but caused to make as *little* comb as possible. Poor honey for this purpose should be poor but *perfectly sound.* Don't expect anything of honey that has changed even a little in the direction of souring. Sound but thin, sound but bitter, sound but black, sound but weedy tasting, are the hopeful kinds. One good way to make bees secrete wax is to give them ready-made extracting-combs to store in, but the cells cut down so as to be only half as deep as they ought to be. Keep slicing down again and again and feeding back the same honey—a little water added. Don't believe I would put the combs in the extractor at all. Another taking way (if not good) is to take new swarms just hived and cut away every four days all the comb they make—all except just enough for starters at the top. Page 26.

OFFICIAL "STANDARD HONEY".

I think the official "Standard Honey" of the government chemists should not allow so much as 25 percent of water. Sorry I can not pretend to say what should be the minimum. Not much less than that found in best 12-pound-to-gallon honey—but somehow few authorities convince us that they can tell *exactly* what that proportion is. Page 36.

ORGANIZING HONEY-PRODUCERS' ASSOCIATIONS.

That's not the way the great trusts of the world accomplish results—to move for them without cash in hand, without confidence, and *without anybody vested with full power to do any identical thing.* Rather seems to me that I'm glad of it that bee-folks hitherto are playing at organization, rather than organizing. Have we exhausted the possibilities of simple agency? One honest, capable salesman should not be impossible to find. And the simple question of the large producer to him, What will you take to sell my honey? hardly requires more of organization than agreement in what order the successive employers shall stand. First man in the line more pay, and last man much less pay. Page 36.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. MILLER, Marengo, Ill.

Van Deusen Wired Foundation—Painting Hives.

1. Have you used the Van Deusen wired foundation? If so, would you recommend its use in brood-frames in preference to putting wire in by hand?

2. Do you recommend painting hives both inside and outside?

VIRGINIA.

ANSWERS.—1. I have never used it to any extent. If the work is well done there can be hardly any choice of the two ways. Either makes good work. But foundation splints make better.

2. Not inside in any case. If I lived in a village with hives in full view of passers-by, I should paint them; not otherwise. I *think* they are a little better for the bees if left unpainted.

◆

Hive-Cleats—Deep Bottom-Boards—Refining Propolis.

1. In "Forty Years Among the Bees" you advise nailing a cleat at the rabbet ends of the hive. Do you nail it flush with the top of the hive? If so, do you use a special cover, or could it be placed so as to use an excelsior cover?

2. Would you also use a deep bottom-board for the 10-frame hive?

3. How can I refine propolis and separate it from wax? Does it lose its aroma when boiled in water?

4. I can not use a dummy the size you recommend with staple-spaced frames. Do you use staples on the frame next to the follower?

5. About how much would you pay to have 100 supers scraped of propolis—8-frame supers with fence separators? Also, how much would you pay to have 50 8-frame bottom-boards made of second-growth pine, complete, such as you recommend in your book?

NEW YORK.

ANSWERS.—1. Yes, the cleat comes flush to the top of the hive. It can be used with any cover that is flat on the under side, but not with a cover that has projections below the under surface at the ends, unless the cover is made enough longer to make up for the cleats. In any case I prefer a cover entirely flat on the underside. Quicker to handle in putting on.

2. Most certainly.

3. I don't know how to refine propolis. I have separated propolis and wax by putting it in a dripping-pan in the oven and pouring off the wax; but it doesn't make a perfect job. One would think it would work to boil in water. Boiling water doesn't seem to hurt the aroma of propolis.

4. Yes, the frame next the follower or dummy is just the same as all the rest with staples—no, not staples but nails—on one end of the frame next the dummy, and there's plenty of room for the dummy. I suspect you have 10-frame hives made too narrow to take a dummy, as a good many are made. That's an invention of the—well, I don't know whose notion it is; but something ought to happen to him for getting up a thing so difficult to use. Rather than to use self-spacing frames without a dummy, I'd go back to loose-hanging frames, and I'd feel very sad to give up self-spacing frames. If I had a 10-frame hive too narrow to admit a dummy *easily*, I think I'd use only 9 frames and a dummy.

5. Sorry to say I don't find a record of cost of bottom-boards; perhaps about 20 cents each. To scrape such supers and separators I'd give $1.50 a day, and I don't know how many would be done in a day.

◆

Preventing Afterswarms.

After the first swarm is out, and as soon as I can hear a queen pipe the seventh or eighth day, is it safe then to destroy all queen-cells, and will the colony have a queen hatched? I don't want my bees to swarm more than once. MINNESOTA.

ANSWER.—Yes, it is entirely safe to destroy all queen-cells as soon as you hear piping, and you may then be reasonably certain that swarming for that colony is all over for the year.

◆

Miller Frame—Deep Hive-Bottom—Latham Hive, Etc.

I kept bees 15 or 20 years ago in the original Langstroth hive, with single bottom nailed to the hive. I am 66 years of age, live in Will Co., Ill., and will start anew, keeping just a few colonies to employ my time partly, produce enough honey for my family, and a little to give away to my friends.

As I have not studied bee-keeping the last 20 years, in reading the American Bee Journal I find so many new things that I do not understand. One is the double bottom-board, as you describe it on page 89. Is this double bottom fastened to the hive, or does the hive simply rest on it loose? What is the object of it being double when it is open on the end? It can not be for a dead-air space beneath the hive. I would like a direct answer to the following questions:

1. In what respects does the Miller frame differ from the Langstroth frame and the staple-spaced frame?

2. Dummy frames—their construction and use.

3. The double bottom-board mentioned on page 89—its benefits over the single bottom.

4. Your opinion of the Latham hive for comb honey as described on pages 21 and 37—also as to the crosswise, closed-ends-to-bottom frames. ILLINOIS.

ANSWERS.—1. The Miller frame is only one form of the Langstroth frame. It differs from most other frames in that top, bottom, and end-bars are all the same width, 1⅛, and the frames are spaced apart by means of four heavy 1¼-inch wire-nails with heads about 3-16 of an inch across, the nails being driven in so as to project ¼ inch. It is easy to drive them in the exact depth by having a hardwood stick ¼-inch thick held close beside the nail when it is driven. A nail is driven into each end of the top-bar on opposite sides about ¼ inch from the top, and 1½ inches from the extreme end; and into each end-bar a like nail is driven 2¼ inches from the lower end. Hold up the frame before you, and the two nails on the right end of the frame will be on the side of the frame from you, and at the left end on the side toward you.

2. Take a top-bar and nail on a board so that the length of the board is the same as the length of a frame, and the depth of top-bar and all the same as the depth of frame, top-bar and all. That's your dummy. It may be an inch thick, or anything less down to ¼ inch. It is used to fill up any space desired, and especially at one side of a hive. If no dummy is in the hive it is hard work to get out the first frame if the frames are self-spacing or fixed-distance frames. If there is a space filled with a dummy at one side, it is easy to take out the dummy, and then easy to take out any desired frame.

3. I think you will not find a *double* bottom-board mentioned on page 89, only a *deep* one. The advantage of that 2-inch space under the bottom-bars is that in winter there is no danger of its being clogged with dead bees, and in the cellar it allows full ventilation.

4. I do not think I should like it. Frames running parallel to the entrance have been in common use in Europe, but they seem to be now favoring what is called the "cold arrangement", as commonly used in this country. The "warm arrangement" is a step backward.

◆

When to Put Bees Out of the Cellar.

I have 5 colonies of bees in the cellar wintering on sugar syrup. The mercury ranges from 30 to 36 degrees above zero. How early will it do to put them out? I want to feed them a little each day and start brood-rearing as early as possible. CONNECTICUT.

ANSWER.—Don't bring them out to stay out till red or soft maples are in bloom, and not then unless it has quite the appearance of settled weather. If, however, you are anxious to do so, they could be brought out on a warm day in the first part of March for a flight, and then taken back in the evening.

If you had asked whether it was desirable to start bees brood-rearing as early as possible, I should have advised not to be in too much of a hurry; but as you haven't asked I'll say nothing about it.

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Reports and Experiences

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Honey is the best thing to eat in this world, and it should not be disgraced in the way that some of it is. It is just as necessary to enact laws to stop the sale of unripe honey as it is to stop adulteration of honey. Offering for sale poor, unripe, thin stuff hurts the sale of honey more than anything else combined. Buyers sample it, and think that if that is

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real honey they do not see that it is so very good after all, and conclude not to buy any, when, if it had been good, ripe honey it would have helped instead of hindered the demand.
Boone Co., Nebr., Jan. 31. W. H. MILLS.

Worker and Drone Eggs—Foul Brood—Bee-Paralysis.

I have had a few colonies of bees, off and on, for many years. When I got a good start I would sell them, then later get the bee-fever again, buy a few colonies, etc. But a year ago I decided to go into it and stay by it. So I bought 124 colonies from a bee-keeper, also his extractor and all the supplies he had on hand. He had the bees all put away for winter, and assured me that they were all right. I did not go near them until spring, as I had other business to attend to, but when I got ready to put them out I found them all starved to death but 17 colonies, and they were in bad condition. But I stuck to it,

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OTISVILLE, PA., Jan. 18, 1904.
Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. FRED FODNER.

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Low in price. Fully guaranteed. Send for free catalogue.
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BANTA MFG. CO., LIGONIER, INDIANA.

H. M. ARND, Manager.

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Catalog and prices on honey on application. If you want **Good Goods at Factory Prices and Prompt Shipment,** send your orders to the
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☞ Beeswax taken in exchange for Bee-Supplies, or for Cash.

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Lowest Prices and Highest Quality. Our New Catalog just out. Write for it. Compare prices with others. 15 years' experience. Not in the Combination. Modern Machinery. Sections and Shipping-Cases by the car-load. Prompt shipments. Hives, Extractors, Feeders, and all Supplies used by bee-keepers. All goods guaranteed as per Catalog.
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In mortality to those insured in the
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—OF—
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EACH POLICY HOLDER is entitled to a Bond issued by the National Total Abstinence League.
YOU may hold a policy and BOND.
General and special agents wanted. Address,
3D28t A. S. RENNIE, Mgr., 614 Marquette Bldg., Chicago, Ill.

doing the best I could with what I had. I increased to 35 colonies and sold about $125 worth of honey.

I am wintering them in a house above ground, and they seem to be all right. I put them into winter quarters the first week in November, and they will not see daylight until April.

I watch for all the answers to questions in the Bee Journal with great interest, trying to learn something. But the things that puzzle me seem to puzzle old experts, too.

I supposed there was no difference between a worker-egg and a drone-egg, and that a worker or a drone could be produced from any kind of an egg, as I know a queen is produced from a worker-egg.

I had a case or two of what I think was foul brood last summer. I think it was caused by the brood being scalded or overheated. I had to put them in a sheltered place to keep off

Garden Seeds

The good garden depends on good seed and right soil. We would like to supply you with the good seed and will send 1 package each of Beet—Egyptian; Cabbage—Surehead; Carrot—Danvers; Corn—Early; Cucumber; Lettuce; Musk Melon—Rocky Ford; Water Melon—Peerless; Onion; Radish—Scarlet; Squash—Marrow; Tomato—Beauty; also a package of Mixed Flower Seeds and our new Annual Seed Catalog all for 20c.

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THIS LIGHTNING Lice Killing Machine

kills all lice and mites. No injury to birds or feathers. Handles any fowl, smallest chick to largest gobbler. Made in three sizes. Pays for itself first season. Also *Lightning Lice Killing Powder*, *Poultry Bits*, *Lice Murder*, *etc.* We secure special low express rates. Catalog sent free. Write for it.

CHARLES SCHILD CO.
40t Detroit St., Cleveland, Ohio

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Bee-Keepers' Supplies.
Send for Catalog.
Leahy Mfg. Co., East St. Louis, Ills.
2A16t Please mention the Bee Journal.

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24A48t No. 75. Birmingham, Alabama.

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Made of artificial stone. Practically indestructible, and giving entirely satisfactory results. Comb foundation made easily and quickly at less than half the cost of buying from the dealers. Price of Press, $1.50—cash with order. Address,

ADRIAN GETAZ,
44At KNOXVILLE, TENN.

Please mention Bee Journal when writing.

Ahead of Shook-Swarming!

The March Review is now in course of preparation, and will be out about the middle of the month. One article in this issue will be by H. G. Sibbald, of Canada, and he will describe a new system of management that promises to be away ahead of shook-swarming. It has these advantages: No shaking of the bees; no handling of the brood; no possibility of the queen being in the wrong hive; no danger of after-swarming; no increase unless desired (but easy to secure if wanted); no queen-cells to hunt up and destroy; yet the whole force of bees may be kept together the whole season, and each colony may be requeened with a queen from a naturally-built cell.

This is only a single article in one issue of the Review, but it is a fair sample of the information that you are losing if you don't read the Review, and what you will gain if you do read it. Send $1 00 for the Review for 1905, or, if you prefer, send 10 cents, and when the March issue is out a copy will be sent you, and the 10 cents may apply on any subscription sent in during the year.

W. Z. HUTCHINSON, Flint, Mich.

Amour Berberry Hedge

This hedge is of special value as a wind-break and also makes a fence that will turn all kinds of stock. A fast grower; **hardy**; does not sprout from root and bears fruit equal to currants for jelly and wine.

Just the Right Protection for Barns and Orchard

Grows 16 to 18 feet high if not trimmed. Write today for full particulars and special introductory offer. Catalogue of all kinds of **Hardy Fruits, Evergreens,** etc., free for the asking. Twelve 2-year Evergreens free. Postage 5 cents.

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We save freight on our raw material and save on fuel and labor, consequently are able to sell at a less price than would be possible otherwise.

The quality of our products is standard, and guaranteed to be such. Money back if not satisfied.

JOHN DOLL & SON,
Power Building, MINNEAPOLIS, MINN.

GOOD DISCOUNTS ON EARLY ORDERS
COMPLETE STOCK OF BEE SUPPLIES--LEWIS CO.'S AT FACTORY PRICES
MUTH SPECIAL HIVE THE BEST DOVE TAIL MADE
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Louis Hanssen's Sons
Carry a complete stock of
G. B. LEWIS CO.'S
B-WARE
Lowest prices and quick service.
Send us your orders and find out.
Davenport, Iowa, 213-215 W. 2d St
Please mention the Bee Journal. 36A26t

4% Discount to Feb. 1st

on the Best Dovetailed Hive made. Cheaper than the cheapest. Circular ready to mail. Don't miss it. 200 second-hand hives for sale cheap.

The Wood Bee-Hive and Box Co.
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WE SELL ROOT'S GOODS IN MICHIGAN

Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.

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MEANS
A SOLID HOUSE.

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MEANS
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Send for our 1905 Catalog.

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Hardy varieties; yield big crops. Grafted Apple, 4½c; Budded Peach, 3½c; Black Locust Seedings, $1 per 1000; Concord Grapes, $2 per 100. We pay the freight. Catalog, English or German, free.
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Bee SUPPLIES
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BIG DISCOUNTS FOR EARLY ORDERS.
Our 60-page Illustrated Catalog is out. Send for one. IT'S FREE.
GRIGGS ✣ BROS,
521 Monroe Street,
TOLEDO, - OHIO.

4A23t Please mention the Bee Journal.

the cold wind in the spring, and when the hot weather came it was too warm and sultry for them. After that there were cases of bee-paralysis. I stood in wonderment watching the bees hopping all over the yard dying, and in a day or so it was all over. That's all I know about the disease, and if I understand it rightly the members of the St. Louis convention didn't know any more.

NELS CHRISTENSEN.

Crow Wing Co., Minn., Feb. 1.

Home-Made Hives.

In the editorial on pages 99 and 100 I am satisfied with what is said by the Editor, with the exception of the statement:

"But is it true that hives may be made by any one who understands how to handle tools? The average carpenter or cabinet-

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That's what users say about the great
PRAIRIE STATE
Incubators and Brooders
Our Illustrated catalog tells why they are best. It's *free*. Write.
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That covers the whole Apicultural Field more completely than any other published,
send $1.20 to
Prof. A. J. Cook, Claremont, Cal.,
FOR HIS
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Liberal Discounts to the Trade.
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10,000 Plants for 16c
More gardens and farms are planted to Salzer's Seeds than any other in America. There is reason for this. We own and operate over 5000 acres for the production of our warranted seeds. That you may try them, we make you the following remarkable offer:
For 16 Cents Postpaid
1000 Fine Solid Cabbage,
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2000 Juicy Tender Turnips,
2000 Nutty Tender Celery,
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Above seven packages contain sufficient seed to grow 10,000 plants, furnishing **bushels of brilliant flowers** and lots and lots of choice vegetables, together with our great catalog telling all about Flowers, Roses, Small Fruits, etc., all for 16c in stamps and this notice.
Big 140-page catalog alone, 4c.
JOHN A. SALZER SEED CO.,
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$12.80 For 200 Egg INCUBATOR
Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day
GEO. H. STAHL, Quincy, Ill.

BEES FOR SALE
I wish to sell 40 colonies of Bees. They are the Italian Strain, in a good, strong condition, and are wintering good. Reasons for selling: No time to take care of them. Will sell all, or 5 or 10 colonies. Inquire of
F. M. SCHEDER,
7A4t PRESTON, IOWA.

THE BEST THERE IS.

Bee-keepers, like all other fair-dealing people, want the BEST of goods, the BEST of service in filling their orders, the BEST of prices and the BEST of everything connected with getting their Supplies; the VERY BEST that can possibly be given for the money is necessary to give entire satisfaction and what all should have.

To absolutely please bee-keepers in filling their wants has been our constant aim for eight years, and while we do not boast about ourselves we are sure that we are excelled by nobody. If you are not already a customer don't fail to write to us and tell us your wants.

Bees, Supplies, Honey and Beeswax.

Lewis' Goods at Factory Prices.

SPECIAL DISCOUNTS given on all orders before the rush season.

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Is there any better proof than this, that we satisfy and please our customers?

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They are the ROOT GOODS, and we sell them at Des Moines at Factory Prices.

Write for estimate and discounts. We can save you money. Send to-day for 1905 catalog.

JOSEPH NYSEWANDER Iowa Phone 968 565 & 567 W. 7th St. Des Moines, Iowa

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Send for Our 1904 Catalog and Price-List.

OUR HIVES AND SECTIONS

Are Perfect in Workmanship and Material.

By sending in your order NOW, you will SAVE MONEY, and secure prompt shipment.

We will allow you a cash discount of 3 percent on orders sent in during January.

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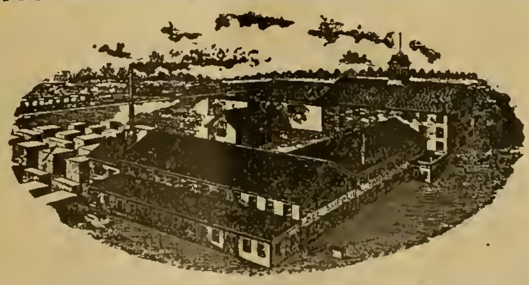

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Discount for Early Orders

We carry a large stock and greatest variety of everything needed in the Apiary, assuring BEST goods at the LOWEST prices, and prompt shipments. We want every bee-keeper to have our FREE ILLUSTRATED CATALOG, and read description of Alternating Hives, Massie Hives, etc. WRITE AT ONCE FOR CATALOG

AGENCIES.—Trester Supply Co., Lincoln, Neb.; Shugart & Ouren, Council Bluffs, Iowa; Fulton & Ford, Garden City, Kan.; I. H. Myers, Lamar, Colo.; Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex. **KRETCHMER MFG. CO., Red Oak, Iowa.**

Please mention Bee Journal when writing.

DITTMER'S FOUNDATION

—IS THE BEST—

Will tell you why if you will send for FREE CATALOG AND SAMPLES.

EARLY ORDER DISCOUNT ON FULL LINE OF SUPPLIES.

WHOLESALE AND RETAIL.

Working Wax into Foundation for Cash a Specialty.

E. Grainger & Co., Toronto, Ont., Sole Agents in Canada for Dittmer's Foundation.

GUS DITTMER, Augusta, Wis.

Please Mention the American Bee Journal when writing Advertisers

maker is generally supposed to understand how to handle tools, but give him an order to make a hive and see if it will be satisfactory. Exactness of measurement beyond that to which he is accustomed is demanded in the making of a hive."

This part of the reply is what is misleading. I am an old-time cabinet-maker, and wish to say for all time to come that a cabinet-maker must know how to use tools, and, more than that, he must have a practical use of them. Don't say "exactness of measurements beyond that to which he is accustomed". It is not correct.

I will give you a true illustration by giving you what is a fact:

When working in the shop I made a bureau, and when it was finished the "boss" came to inspect the job. After taking a long look he started away, but turned his head for another glance, saying, "Why, you have put the locks all on the bottom of the drawers, and worked key-holes at that". We went back to take another look. "Oh", said I, "I left the drawers upside down and then turned them over, and they fit as well one way as the other, and you can pull the drawers out without a hitch with one pull, and can push them in with one thumb on either corner, and when one end is in so is the other".

But the factory-made furniture has run us out of business, even if we can get lumber much cheaper than the factories. And I say no man can afford to make his own hives, no matter how cheap he can get his lumber—even if he can get it for nothing—if he can get anything to do of any kind at wages of 75 cents per day and board, or $1.00 per day and board himself. Not because he can not work close enough, but because hand-labor is too slow, and the more accurate the work the slower. This is where the machinery makes the gain, for the faster it turns out the work the nicer the job. B. W. FISHER.

Barbour Co., W. Va., Feb. 11.

CONVENTION NOTICE.

Utah.—The Utah Bee-Keepers' Association will hold its spring convention in the Mayor's Office, City and County Building, April 7, at 10 a.m. All are invited. Matters of great interest to bee-keepers, and horticulturists will be considered. Cache Valley's experience of killing the bees by poison spraying in the bloom must not be repeated. Jot down your thoughts on this or any other question, and bring or mail the same. G. E. GARRETT, Sec.

E. S. LOVESY, Pres.

A WONDER WORKER

A metal incubator that hatches the kind of chickens a hen does—good, strong healthy chicks.

The Cycle Hatcher is the only machine made that conforms to the exact laws of nature in incubation. Wonderful results have been obtained. 50 egg size only $5. Free Catalogue. Cycle Hatcher Co., Box 224, Salem, N.Y.

Please mention Bee Journal when writing

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R. A. BURNETT & CO.,

199 SOUTH WATER ST. CHICAGO, ILL.

FOR SALE

Several Hundred Cases

Nevada White Alfalfa Honey

PRICE—7½ cents per pound, or $9.00 per case of two 60-pound cans, f.o.b. Chicago. Two cases or more at 7 cents per pound. Write for special price on larger quantities. Guaranteed absolutely Pure. Sample, 10c.

H. L. WEEMS,

P.O. Box 267, - CHICAGO, ILL.

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Bee Supplies
Guaranteed Superiority!
Lowest Prices

We have been making Bee-Hives, Sections, etc., for over 20 years.

New .. Illustrated .. Catalog free; also sample copy of

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The best magazine for beginners. (It has been published by us regularly for 15 years.)
Address,
THE W. T. FALCONER MFG. CO.,
JAMESTOWN, N. Y.

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COMPLETE STOCK FOR 1905 NOW ON HAND.
FREIGHT RATES FROM CINCINNATI ARE THE LOWEST,
ESPECIALLY FOR THE SOUTH, AS ALL FREIGHT NOW GOES THROUGH CINCINNATI.
Prompt Service is what I practice.
Satisfaction guaranteed.
You will save money buying from me. Catalog mailed Free. Send for same.
Discounts allowed on early orders. Take advantage by ordering now.
Book orders for GOLDEN ITALIANS, RED CLOVERS and CARNIOLAN QUEENS.
☞ For prices refer to my Catalog.
C. H. W. WEBER CINCINNATI ...OHIO...
Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

Honey and Beeswax

Chicago, Feb. 20.—Honey-business is not too brisk and consequently prices are none too firm. A good deal of pressure is being made by producers as well as dealers upon their correspondents to move consignments. Fancy grades of white comb bring 12½@13c; No. 1, about 12c, with some desirable at 11c. Extracted, 6@7c for white, 5½@6½c for amber, the price being governed by quality, flavor and package. Beeswax, 30c, if clean and of good color.
R. A. Burnett & Co.

Boston, Feb. 23—On account of the very light demand, stocks of comb honey continue to accumulate, causing a weaker market. Fancy white, 15c; No. 1, 14c. Extracted, 6@8c, according to quality. Blake, Scott & Lee.

Kansas City, Feb. 20.—The honey market at present is very low, the best comb stock selling at $2.00 per case of 24 sections, with absolutely no demand for amber or the cheaper grades. Extracted honey selling from 4½@6½c, according to the quality of the stock. Beeswax in good demand at 28c. C. C. Clemons & Co.

Cincinnati, O., Feb. 20.—The comb honey market has been a drag the last month; this caused the holders to offer extra inducements in prices. Quotations obtained are as follows: No. 1 fancy water-white comb, 12@13c; No. 2, 10½@11½c. Extracted: white clover in barrels, 6½c; in cans, 7½@8 cents; amber, in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c.
C. H. W. Weber

Philadelphia, Feb. 20.—On account of the very bad weather the sales among the retail trade in honey have been slow. Quite a good many shipments have been arriving from distant points and the market at the present time is overstocked. We quote: Fancy white comb, 15@16c; No. 1, 13@14c; amber, 12c. Extracted, white, 6½@7c; amber, 6c. Beeswax, 27c.

We are producers of honey and do not handle on commission. Wm. A. Selser.

Cincinnati, Feb. 17.—The demand for honey at the present time is like business—frozen. Nevertheless, we are looking forward to a brighter future. We quote amber extracted honey in barrels and cans at 6@6½c, respectively; white clover at 7@8c.

The conditions of the comb honey market are aught but encouraging, owing to the vast amount of Western comb honey that is being consigned at almost any price. We quote fancy white at 12@13c, with but few sales. Beeswax, 27c. The Fred W. Muth Co.

Albany, N.Y., Feb. 8.—Honey market dull this extreme cold weather, especially comb, which candies or granulates and cracks easily. We quote: Fancy white, 13@14c; No. 1, 12@13c; mixed, 10@11c; buckwheat, 10@11c. Extracted, better demand: Buckwheat, 6@6½c; white, 6@6½c. Buckwheat most in demand, as the Jewish people will have no other. Beeswax, 30@32c. H. R. Wright.

San Francisco, Feb. 16.—White comb, 1-lb. sections, 11@12 cents; amber, 8@10c. Extracted, white, 6@6½ cents; light amber, 4½@5½c; amber, 3¾@4¼c; dark amber, 3@3½c. Beeswax, good to choice, light, 29@30c: dark, 27@28c.

There is a moderate movement on local account and some small shipments are being made outward. Values are without quotable change, but dealers are desirous of reducing holdings and market is favorable to buyers, especially for other than most select. A carload of comb honey arrived from Nevada.

New York, Feb. 8.—The market is decidedly dull on comb honey and very little moving, with plentiful supply. We quote: Fancy white comb, 14c; No. 1, 13c; amber, 11c; dark, 9@10c. Extracted honey is in fair demand, and prices remain about the same. Beeswax steady and in good demand, 29c. Hildreth & Segelken.

"If Goods are wanted Quick, send to Pouder"

BEE-SUPPLIES
Root's Goods at Root's Prices
Everything used by Bee-Keepers.
POUDER'S HONEY-JARS. Prompt Service.
Low Freight Rates. ∴ ∴ ∴ Catalog Free.
One of those nice FLEXIBLE BEE-HATS included free with every shipment, if you will mention it when ordering, telling where you saw the offer.
WALTER S. POUDER,
513-515 Massachusetts Ave., INDIANAPOLIS, IND.

Wisconsin Basswood Sections
And Prompt Shipments
Is what we are making for our customers.
— DOVETAILED HIVES AND SHIPPING-CASES —
We carry a full line of SUPPLIES. Ask for Catalog.
THE MARSHFIELD MANUFACTURING CO., Marshfield, Wis.

CHICAGO! CHICAGO!! CHICAGO!!!

LEWIS' GOODS IN CHICAGO

NOTICE.

We have just arranged with the following well-known firm for the sale of our goods in Chicago. They will handle our Bee-Supplies in **LARGE QUANTITIES** at **FACTORY PRICES** and can furnish you anything in our Catalog promptly.

YORK HONEY AND BEE SUPPLY CO. (Not Inc.) **H. M. ARND, Mgr.**
141 & 143 Ontario Street, CHICAGO, ILL.

WATERTOWN, LEWIS U.S.A.

ALL ROADS LEAD TO CHICAGO.

The exceptional railroad facilities offered by Chicago make it the ideal shipping-point. This gives you the combination of excellent service and the **BEST GOODS** in the world.

BEWARE
WHERE YOU BUY YOUR
BEEWARE
WATERTOWN, LEWIS U.S.A.
MAKES THE FINEST

G. B. LEWIS CO. Manufacturers of Bee-Supplies **Watertown, Wis.**

DUTIES ON HONEY, AND THE NATIONAL.
C. P. DADANT.

HONEY AND POLLEN IN BROOD-COMBS.
G. M. DOOLITTLE.

MASSACHUSETTS AGRICULTURAL COLLEGE

American Bee Journal

OUR TOIL DOTH SWEETEN OTHERS

45th Year. CHICAGO, ILL., MARCH 9, 1905. No. 10.

WEEKLY

APIARY OF PAUL JONES, OF POLK COUNTY, MINNESOTA.

Every Bee-Keeper

Or Prospective Bee-Keeper

should read GLEANINGS IN BEE CULTURE. It gives you the latest in the apicultural world. If you have honey and wax for sale it tells you the market prices. If you have troublesome questions to solve, it helps you. The very best bee-keepers write for it. The following noted writers contribute regularly:

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Of Illinois.
G. M. DOOLITTLE,
Of New York.
J. A. GREEN,
Of Colorado.
LOUIS SCHOLL,
Of Texas.
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Semi-monthly. Over a thousand pages annually. Illustrated fully with the finest half-tones, printed on the best paper. It has the largest circulation of any bee-paper in the world. $1.00 a year. Sample copy free.

⁂

TRIAL OFFER!

Gleanings in Bee Culture, 6 months, 25c.

We are certain that any one interested in bees would be greatly benefited by becoming a subscriber to GLEANINGS IN BEE CULTURE. We want you to give it a trial. After you have received a few numbers we are sure you will become a permanent subscriber. We therefore make a special trial offer of 6 months for 25c. Fill in your name in space below, remit 25 cents, and the paper will begin at once.

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Enclosed find 25 cents, for which send me Gleanings in Bee Culture 6 months.

NAME ....

P. O. ....

COUNTY ....

STATE ....

Root's Goods in Chicago.

For the saving of freight for our western trade, as well as to give much quicker delivery, we opened a branch office in Chicago, Oct. 1, 1903. The following taken from our catalog of last year, explains the transfer then made:

> The business for many years conducted by George W. York & Co., at 144 E. Erie Street, as agent for The A. I. Root Company's supplies, is this day transferred to The A. I. Root Company, to be conducted as a branch office. Please note change of name to avoid confusion in our work. THE A. I. ROOT CO.
> October 1, 1903.
>
> *To Our Customers and Friends:*
>
> In transferring back to The A. I. Root Company the bee-supply business, which we took over from them some years ago, we do so with regret, as we have labored hard to build up a large and honorable trade in bee-appliances, and value beyond expression the valuable patronage accorded us during the years. We trust the same will be continued to our successors in the business.
> GEORGE W. YORK & CO.
> Chicago, Ill., Oct. 1, 1903.

The conveniences offered by the branch office were evidently appreciated by the bee-keepers of Illinois, Wisconsin, and other States beyond, for the business done by the branch was much beyond our expectations. During the rush season—April, May and June—orders came in so fast that, in spite of frequent orders to the factory for another car of goods, the stock ran low, and some delays and annoyances thereby were caused. Some little confusion because of change of name and manner of conducting the business (from agency to branch office), but these have all been overcome. We are better than ever prepared to handle your business carefully and promptly, and solicit your patronage.

Low Freight and Quick Delivery.

A glance at any railroad map will show the superiority of Chicago as a shipping-point. Because of the great number of railroad and steamboat lines centering in Chicago, and the large stock of goods we carry, we can give you the best of service. This office is in constant touch with the factory and home office, and in many cases can give your order quicker attention and earlier shipment than the factory, to say nothing about the saving in time and transit and lower transportation charges.

Wholesale and Retail.

We are prepared to furnish goods at wholesale and retail, the same as the home office.

Terms.

Our terms are cash with the order. We pay cash for material, and pay our helpers cash every week for their work; therefore we must have cash in advance for the goods furnished. Do not ask for credit.

Beeswax Wanted.

We are in the market for good beeswax the entire year, and pay the same prices as quoted by our home office in each issue of GLEANINGS IN BEE CULTURE. Send your wax direct to us for cash or in exchange for supplies.

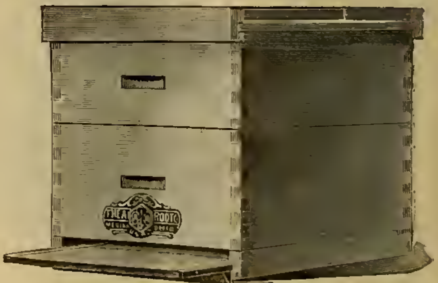
Extracted Honey.

In the course of a year we use large quantities of extracted honey, and are pleased to get sample and prices from parties who have honey to exchange for supplies. We are also prepared at all times to furnish first-class honey to any one who is in need of same, either bee-keepers who have a demand for more than they can furnish, or from dealers. Get our prices before you place your orders elsewhere.

DANZENBAKER HIVE.

"Facts About Bees", a 64-page book written by Mr. F. Danzenbaker, giving a complete description of his famous hive and directions for using. Full of valuable information. Sent on receipt of a 2-cent stamp to pay the postage. **Send for it.**

The Danzenbaker Hive



THE COMB-HONEY HIVE.
Three Points of Excellence:

QUALITY
You can produce better-looking honey.

QUANTITY
You can produce more of it.

PRICE
You can get more per pound for it.

SPECIAL NOTICE.

The great popularity of the Danzenbaker hive has brought the shallow brood-frame and the tall plain sections into prominence. It must be remembered that no other hive contains the essential features of the Danzenbaker. The success of this system depends on having everything JUST RIGHT, so you should place your order for the Danzenbaker hive with our office, or any of our branches or regular agents.

Address all Orders, Remittances, Inquiries, etc., to

THE A. I. ROOT CO., 144 East Erie Street, Chicago, Ill.

ESTABLISHT IN 1861
AMERICAN BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA
Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

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GEORGE W. YORK, Editor. CHICAGO, ILL., MARCH 9, 1905. Vol. XLV.—No. 10.

Miscellaneous News Items

The Ontario Convention Report was crowded out of last week's number of the American Bee Journal, and also again this week. But next week we expect to issue another double number in which we will complete that report, and also publish much other interesting matter.

* * *

The Michigan Convention was held in Grand Rapids Feb. 23 and 24, and we had the pleasure of being present. While the attendance was not as large as anticipated, it was a splendid meeting in many ways. It was another proof of the value of the question-box program. Among others who are well known to the reading bee-keeping public, there were present T. F. Bingham, W. D. Soper, L. C. and A. G. Woodman, E. D. Townsend, and Huber H. Root (of Ohio); also these who were elected as officers for the ensuing year: President, W. Z. Hutchinson; Vice-President, Geo. E. Hilton; and Secretary-Treasurer, E. B. Tyrrell, of Davison. We expect to publish a report of the meeting a little later in these columns.

* * *

The Fourth Annual Report of the Illinois State Bee-Keepers' Association will be issued some time in April—next month. It will contain full reports of the last meetings of both the Illinois State and the Chicago-Northwestern conventions; information on foul brood and other diseases of bees, and how to treat same; also a list of the names and addresses of the membership of the Illinois Association which numbers almost 200 members. Any Illinois bee-keeper who wishes to have his name and address in the forthcoming report, should send his dollar to the Secretary, Jas. A. Stone, Route 4, Springfield, Ill., before April 1. This dollar will also pay a year's membership in the National Bee-Keepers' Association. Better attend to this at once, Illinois Bee-Keeper, and help yourself as well as the two Associations mentioned.

* * *

Result of the National Election of Officers.—February 27 we received the following from W. F. Marks, chairman of the Board of Directors of the National Bee-Keepers' Association, but it came too late for publication last week:

To the Members of the National Bee-Keepers' Association:—

The chairman of the Board of Directors is in receipt of a letter from Mrs. Geo. W. Brodbeck, dated Feb. 11, 1905, announcing the death of her husband, Secretary Geo. W. Brodbeck, and inclosing the following result of the ballot taken last November for officers of the National Bee-Keepers' Association:

The whole number of votes cast for President was 355, of which J. U. Harris received 232, C. P. Dadant 89, Dr. C. C. Miller 11, G. W. York 4, G. W. Brodbeck 2, N. E. France 2, E. R. Root 2, and the following 1 each: Secor, Cook, Stone, Aikin, Benton, Hutchinson, Hannegan, McIntyre, Harren, Abbot, Grenner, Lovesy, Toepperwein.

The whole number of votes cast for Vice-President 355, C. P. Dadant received 251, J. F. McIntyre 46, J. U. Harris 9, G. M. Doolittle 7, Dr. C. C. Miller 5, E. T. Abbott 5, G. W. York 4, G. W. Brodbeck 4, M. A. Gill 3, W. Z. Hutchinson 3, Muth 2, Hershiser 2, Pennington 2, Duff 2, Akslin, Marks, Hull, Moore, Cook, Lovesy, Hyde, Nebel, Hambaugh, E. R. Root 1 each.

The whole number of votes cast for Secretary was 359, of which W. Z. Hutchinson received 203, G. W. Brodbeck 95, G. W. York 23, W. H Laws 15, E. T. Abbott 4, L. Scholl 3, F. E. Brown 3, France 2, and Hide, Moore, Dadant, Doolittle, Niver, Hyde, Miller, Loveland, Dallant, Kate V. Austin, E. R. Root 1 each.

The whole number of votes cast for General Manager was 349; N. E. France received 336, L. F. Scholl 4, R L. Taylor 3, C. P. Dadant 2, G. W. York, W. Z. Hutchinson, E. T. Abbott, O. O. Poppleton 1 each.

The whole number of votes cast for Director to succeed E. Whitcomb was 165; E. Whitcomb received 100, H. H. Hyde 26, F. Muth 8, N. E. France 5, H. E. Hill 3, M. A Gill 3, E. T. Abbott 3, W. S. Coggshall 2, C. H. Webber 2, J. H. Havistin 2, and H. Lathrop, E. D. Townsend. Eugene Secor, J. F. McIntyre, L. Scholl, Ed Bevins, J. Heddon, U. Toepperwein, C. A. Thompson, A. I. Root, G. W. York 1 each.

The whole number of votes for Director to succeed W. Z. Hutchinson was 256; R. L. Taylor received 102, W. Z. Hutchinson 83, G. W. Brodbeck 18, J. L. Smith 8, M. A. Gill 7, H. E. Hyde 4, C. P. Dadant 4, G. W. York 3, Ernest Root 3, Eugene Secor 3, and Geo. E. Dudley, R. C. Aikin, Hershiser, Cook, Abbott, Poppleton, Barge 2 each, Kretchum, A. I. Root, Mrs. N. J. Stow, E. B. Tyrrel, W. S. Hart, P. H. Elwood, J. U. Harris 1 each.

The whole number of votes cast for Director to succeed Udo Toepperwein was 311; Udo Toepperwein received 189, E. S. Lovesy 50, H. H. Hyde 24, F. Laten 6, Dr. Miller 5, J. F. McIntyre 4, H. E. Hill 4, H.

Special Announcement.

Although I have stated the fact twice (pages 116 and 164) that on Feb. 1, 1905, I sold all my interest in The York Honey Co. to Mr. H. M. Arnd, there seem to be some of the readers of the American Bee Journal who either have not read the two notices referred to, or else do not place credence in them. Let me say as plainly as possible, that neither the writer nor the American Bee Journal is now connected with the handling of honey or bee-keepers' supplies. Of course as editor and publisher of the American Bee Journal, I shall continue to encourage the production, use and sale of both honey and bee-keepers' supplies, for I believe that bee-keeping is but in its infancy, and that there are great possibilities in it which will be developed as time goes on. And it will be my constant aim to help advance the interests of all concerned, through the columns of the American Bee Journal, in the future as in the past.

Thanking the thousands who have helped make the American Bee Journal what it is to-day, and soliciting a continuance of their hearty support, I am

Yours for good bee-literature,

GEORGE W. YORK.

Chicago, Ill., March 1, 1905.

Mendleson 4, F. Benton 4, W. H. Laws 4, O. L. Hershiser 3, F. L. Aften, Chas. Stewart, F. E. Brown, E. T. Abbott, N. L. Stevens 2 each; M. Rorig, J. L. Smith, T. E. Fisk, R. L. Taylor 1 each.

J. U. Harris having received a plurality of the votes cast for President was elected President.

C. P. Dadant having received a plurality of the votes cast for Vice-President was elected Vice-President.

W. Z. Hutchinson having received a plurality of the votes cast for Secretary was elected Secretary.

N. E. France having received a plurality of the votes cast for General Manager was elected General Manager.

E. Whitcomb, R. L. Taylor, and Udo Toepperwein having received the greatest number of votes for Directors, to succeed those whose terms expired, were elected Directors.

The result of this ballot should have been declared last December, but owing to the fatal illness of Secretary Brodbeck it has been delayed.

W. F. Marks,
Chairman Board of Directors National Bee-Keepers' Association.
Feb. 23, 1905.

* * *

John A. Martin, of Delta Co., Colo., called on us recently. He has been keeping bees with his father for some years, and the elder Martin has been a reader of the American Bee Journal for many years. They are in an irrigated alfalfa country, and in good seasons their bees turn out considerable honey.

* * *

To Illinois Bee-Keepers.—Secretary Jas. A. Stone, of the Illinois Bee-Keepers' Association, sends us the following as another part of the Bill published on page 116 (it having been divided), requesting us to publish it, and at the same time desires us to urge every bee-keeper in this State to write his senator and representatives now in Springfield, Ill., to be sure to support and vote for the bee-keepers' Bills:

A BILL.

For an Act providing for the appointment of a State Inspector of Apiaries, and prescribing his powers and duties.

Sec. 1.—Be it enacted by the People of the State of Illinois, represented in the General Assembly: That the Governor, by and with the advice and consent of the Senate, shall appoint a State Inspector of Apiaries, who shall hold his office for the term of two years and until his successor is appointed and qualified.

Sec. 2.—Said Inspector shall, when notified of the existence of the disease known as foul brood among apiaries, examine all such as are so reported, and all others in the same locality, and ascertain whether or not such disease exists, and if satisfied of its existence, shall give the owner or the person who has the care of such apiaries full instructions as to the manner of treating them. In case the owner of a diseased apiary shall refuse to treat his bees, or allow them to be treated as directed by the said Inspector, then the said Inspector may burn all the colonies and all the comb necessary to prevent the spread of the disease, provided said Inspector shall, before burning, give one day's notice to the owner or other person who has the care of the colonies of bees and comb, that in his judgment should be burned.

Sec. 3.—The Inspector shall, on or before the second Monday of December in each calendar year, make a report to the Governor and also to the Illinois State Bee-Keepers' Association. stating the number of apiaries visited, the number of those diseased and treated, the number of colonies of bees destroyed, and of the expenses incurred in the performance of his duty.

Sec. 4.—Any owner of a diseased apiary, or appliances taken therefrom, who shall sell, barter, or give away any such apiary, appliance, or bees from such apiary, expose other bees to the danger of contracting such disease, or refuse to allow the Inspector of Apiaries to inspect such apiary, or appliances, shall be fined not less than fifty dollars nor more than one hundred dollars.

* * *

To Missouri Bee-Keepers.—Again the attention of the bee-keepers of Missouri is called to a matter which vitally affects their interests. Read what Mr. R. Holekamp, of St. Louis County, says in the following communication:

Dear Mr. York:—I returned last week from Jefferson City, where I appeared before the Committee of Agriculture of our Senate, to which our Apiary Bill had been referred. The committee reported the Bill favorably; it was engrossed the next day, and I expect it to pass the Senate and go to the House before the end of this week.

I intend to go to Jefferson City again, when the Bill is referred to the House Committee of Agriculture, and appear before that Committee.

Our Apiary Bill makes apiculture part of the Agricultural Department of our State (Missouri State Board of Agriculture), which is of immense advantage to our industry. Our State Board of Agriculture issues a bulletin about every one or two months, which is mailed for a year to any person asking for it, free of any expense. After the year has expired an inquiry comes, whether the bulletins are still desired, and if the answer is in the affirmative, the bulletins come again for a year, and so on. At the end of the year all bulletins are bound in one volume, together with the report of the Secretary, and are distributed free of charge.

In these bulletins a few pages could be devoted to apiculture, or special bulletins in apiculture be issued and distributed. These bulletins reach bee-keepers who never read a bee-paper. In this way the attention of the farmer bee-keeper can be called to the diseases of bees; he can be made familiar with the symptoms of the diseases, and can be taught to treat them; he can be requested through these bulletins to report to the Board of Agriculture, or the Apiary Inspector, the appearance of foul brood or other diseases in his own or neighbors' apiaries. In this manner the Apiary Inspector can be kept informed where inspection and treatment is needed, and it will be possible to eradicate foul brood and other diseases of bees from Missouri.

The expense to the State in devoting part of the bulletins of the State Board of Agriculture to apiculture would be small, as these bulletins are mailed out as newspaper matter.

I have ascertained through circulars sent out by me, that foul brood exists in different parts of this State; it is in the east, in the west, in the north, in the south, and if bee-keepers are made familiar with the symptoms of the disease, it will be found that a good deal of the so-called "bad luck" of the farmer bee-keeper is caused by foul brood.

Now, bee-keepers of Missouri, those of you who have not already done so, I ask to *write to the representative of your county* when you read this; tell him to support the Apiary Bill; tell him we need it to keep our honey industry from ruin.

Our Legislature will be in session only a few weeks longer, therefore don't delay writing, but sit down right now and urge your representative to help *push this Bill through.* If these letters are showered on our representatives from all parts of Missouri, our Apiary Bill will become a law at this session of our Legislature.

Below will be found a copy of the Senate Bill, No. 268, as engrossed Feb. 21.

Robt. A. Holekamp,
Assistant Secretary Missouri State Bee-Keepers' Association.

AN ACT.

To provide for the appointment of a State Inspector of Apiaries, and to regulate the duties thereof, providing a penalty for disposing of diseased honey or bees, with an emergency clause.

Be it enacted by the General Assembly of the State of Missouri as follows:

Sec. 1.—The State Board of Agriculture of the State of Missouri shall appoint a State Inspector of Apiaries to aid and assist in the development and protection of the honey industry in the State of Missouri, and especially for the eradication and control of infectious diseases known as foul brood, black brood, and bee-paralysis, some of which are known to exist at the present time among some of the apiaries of the State. Said Inspector of Apiaries shall be a practical apiarist, and shall give to the State Board of Agriculture, before his appointment, satisfactory evidence of his practical knowledge of handling bees, and of their diseases, and shall hold his office for the term of two years unless removed for cause.

Sec. 2.—Said Inspector shall, upon satisfactory evidence of the existence of the disease known as foul brood, or other infectious diseases among apiaries, examine such infected apiaries and all others in the same locality, and if satisfied of the existence of foul brood, or any other infectious disease, shall give to the owner or person having charge of any such apiary full instructions as to the manner of treating them. Within a reasonable time after making the first examination, the Inspector shall make a second examination, and if the conditions of any of the colonies affected are such as in his judgment render it necessary he may personally treat the disease, or, if in his opinion it is necessary to prevent further spread of the disease, and the owner refuses to treat them according to the instructions of said Inspector, then the Inspector may burn or otherwise destroy diseased comb or other material that might cause the spread of the infection.

Sec. 3.—The Inspector shall make a full report to the Secretary of the Board of Agriculture at least once each year, stating the number of apiaries inspected, the number found to be diseased, and the number treated, and such other information as he may deem important. The Secretary of the Board of Agriculture shall publish in his Annual Report, or otherwise, such of the information as he deems of importance to the apiarists of the State.

Sec. 4.—Said Inspector shall receive four dollars for each day actually and necessarily spent in the performance of his duties, and shall be reimbursed for the money expended by him in defraying necessary traveling expenses: Provided, the total expenditure for such purposes shall not exceed one thousand dollars in any one year: Provided, further, that the said Inspector shall render to the Board of Agriculture an itemized account of his per diem and expenses, and upon approval of the same by the Executive Committee of the Board of Agriculture, the President and Secretary of the Board are authorized to draw a warrant upon any available funds for the amounts allowed.

Sec. 5.—Any owner of a diseased apiary, or any other person who shall knowingly sell, barter, or give away any colony of bees, honey or other article infected with disease, or expose other bees to the danger of contracting such disease, or refuse to allow the Apiary Inspector to inspect or treat such apiary, honey or other articles so infected shall be guilty of a misdemeanor, and shall be fined not less than five nor more than twenty-five dollars.

Sec. 6.—It being necessary to treat the diseases herein provided for in the early spring, in order that satisfactory results may be obtained, creates an emergency within the meaning of the constitution, and this Act shall go into force and effect upon its passage and approval.

* * *

Notice to National Members.—We have received the following from General Manager France, of the National Bee-Keepers' Association:

Platteville, Wis., Feb. 6, 1905.

FINANCIAL AID.

Dr. Miller's motion, passed by vote of Directors: "That in case of litigation hereafter the financial aid extended by the National Bee-Keepers' Association shall not exceed the sum of one-half the expense incurred in such case". It is not the object, expressed or implied, of the Association to aid the several States to prosecute their burglars or thieves. It is the duty of the commonwealth to prosecute criminals. Also collecting debts due our members, losses by fire or freight, or other personal grievances should not be referred to the Association for settlement. It has no such power to enforce civil law in the hands of officers there for such purposes. City ordinances declaring bees a nuisance, in most cases, are result of personal differences between neighbors. I, therefore, ask you to make neighborly calls frequently, and at times donate a little honey, and avoid trouble.

Make special effort to place your bees out of the cellar after washday, so clothes on lines will not be spotted. Our bees have no right to disturb people or stock in highways, or neighbors' premises. If you have never received a copy of my red-covered 37-page book on "Bee-Keepers' Legal Rights", free to every member, let me know and I will send it.

If you send me samples of suspected diseased brood by mail, be sure it is in a light but strong box, so it will stand transfers by mail. The same applies to samples of honey by mail.

N. E. FRANCE, *Gen. Mgr.*

Why Not Advertise?—Quite frequently we receive postal cards with requests like the following:

"I want to sell my bees. If you know any one who desires to buy, please refer him to me."

"I need a man to help me with my bees. If you know of any good bee-keeper wanting such place, tell him to write to me."

"I want to buy some bees. If you know of any for sale, let me know about them."

It seems a good many people do not yet know that our advertising columns are open to just such notices, and at the low rate of only 10 cents a line, one-half inch (or 7 lines) being the minimum space. This would cost only 70 cents. Isn't it worth that small sum to find a man to work in the apiary, or to sell your bees, or for any other business you want to do?

One of the ways of raising the necessary money to pay our office-help, to pay for white paper, for printing, office-rent, etc., is through the use of our advertising columns by those who wish to buy or sell, etc. We could not publish the American Bee Journal on subscription receipts alone, when we furnish 52 copies for only $1.00. So we must depend upon our advertising receipts to help out. And the advertising columns are open to any and every legitimate and honorable advertiser.

Contributed Special Articles

Duties on Honey—The National Association.

BY C. P. DADANT.

I AM in receipt of letters on this question of duties on honey, from Mr. Frank Rauchfuss, secretary of the Colorado Honey-Producers' Association, and from Mr. Henry Reddert, secretary of the Southwestern Ohio and Hamilton County Bee-Keepers' Association.

Both writers mention the fact that comb honey from Cuba, of inferior quality, is now being sold in United States markets. Mr. Rauchfuss, while hoping for an increase in the tariff, says that if it were made compulsory upon importers and dealers in foreign honey to label it plainly with the country of its production, it would help matters a great deal, as Cuban honey is not so good as the honey produced here, and very much inferior to Colorado honey. The Ohio bee-keepers object to comb honey being imported on the same duty as paid for extracted honey. All ask what is to be done.

If the bee-keepers of this country desire an increase in the tariff, they can surely obtain it by going at it in the right way. It is, however, worth our while to take notice of the fact that duty is always a two-edged sword. American honey has often been exported. When California produced enormous crops, which she is likely to do again, the honey from the Pacific Coast flooded our markets and went to Europe. If we protect ourselves against the importation of an article which we produce largely and may want to export, it is quite likely that other countries will retaliate by putting duties upon our products in the same line. A duty on Cuban honey may protect us against Cuba, and, in the meantime, France or Germany may consider that as we are forcing Cuban honey to flow in their direction, it is necessary to retaliate by putting an interdiction on the importation of all American honey, whether from North or South America.

But if it is thought best by the bee-keepers of this country to obtain an increase of duty, it should be carried on in a practical manner. The National Bee-Keepers' Association has appointed a legislative committee, but such a committee has neither the right nor the power to act without instructions and backing. I believe that it is necessary that this matter be thoroughly discussed in the bee-papers.

I strongly favor the compelling of labeling imported honey with the mark of its origin. It is a fact that if all that is sold under the name of honey could be sold exactly for what it is, there would be no trouble in getting rid of all our product. If the tons of fine honey from Colorado were absolutely known by the consumer to be all pure honey from alfalfa (just what it is), it would all sell readily at good prices. If the glucose that has been mixed with extracted honey by unprincipled dealers was labeled just what it is, there would be but little of it on the market, because the demand for it would be killed. Cuban honey would never sell at a price to compare with our home product. I believe, therefore, that we should lay great stress on obtaining laws that will compel everything to be sold for what it really is.

The National Association is the proper channel through which all National reforms for bee-keepers should be secured, but just now the executive function is in bad shape, owing to the sickness and death of the secretary. Mr. Brodbeck was evidently between life and death several months previous to his demise, and the last election of officers has never been reported by him. Mr. France, the General Manager, has taken upon himself many of the duties of the secretary. It is now urgent that the Board of Directors should take steps towards the appointment of a new secretary, if the returns can not be had, for the National Association will become every day more necessary to the welfare of the pursuit in this country. The time has gone by when men fought their way through the world without association and union with their fellow laborers. Even in the most backward countries of Europe the need of union is being felt for success.

Hamilton Co., Ill.

⁂

Honey and Pollen in Brood-Combs.

BY G. M. DOOLITTLE.

I AM quite often written to by those who think their bees store too much honey and pollen in the brood-combs, and at a bee-convention, some years ago, I heard a man say that he would give $50 for a machine that would remove pollen from the combs without injuring them. And as a letter is just at hand containing these words, "Will you please tell me through the columns of the American Bee Journal why my bees store so much pollen and honey in the brood-combs just before the honey harvest?" I thought I would write a few words on the subject, believing that others may be helped as well as the one asking the above.

Two things generally incite to the storing of too much honey and pollen in the brood-combs at the beginning of the season, or as soon as the bees become numerous and active in May and June in this locality. The first is a poor queen, or one which will not lay enough eggs so that the increasing larvæ from those eggs will consume what honey and pollen is coming in from the fields. In other words, the old or field bees are too numerous for the laying capacity of the queen. The remedy in such a case as this is to change the queen for a younger and more prolific one. And such a change of queens is best made in the fall, for it is far better for a colony to have a prolific queen when spring opens than it is to try to introduce such a queen to take the place of a failing one early in the season.

The other thing inciting to the storing of too much honey and pollen in the brood-combs is too large a hive. If the hive is too large for the capacity of a really good queen, that colony is placed in nearly the same condition as is the one having a failing queen in a smaller brood-chamber, for if the season opens with any large amount of comb unoccupied with brood, the bees will begin storing in the empty comb in the hive rather than enter the sections to build comb there or draw out comb foundation. And having once commenced to store honey and pollen in any large quantities in the comb immediately surrounding the brood, the bees will continue along this line to the detriment of our crop of section honey, and often to the damaging of the wintering success of this same colony.

But even with a good, prolific queen, and a hive of the right dimensions to accommodate her prolificness, it sometimes happens that the queen does not breed up to her full capacity when pollen is coming in freely. Just why queens do not breed sometimes when pollen is coming in very rapidly is a mystery I have never been able to solve, though I have spent much thought and study on the subject. The nearest I have come to the matter is that, for some reason, the bees fail to feed the queen on the stimulating food usually given at all times when she is laying very prolifically.

All observing bee-keepers know that when queens are laying at their best the bees give them food every few minutes, and many think this food is the same, or very nearly so, as that which is fed to the larvæ. But at these times, when the combs are being crowded about the brood-nest with pollen and honey, it is a rare thing that I find the bees feeding the queen. For this reason I have always felt that the fault lay with the bees rather than with the queen, and if any one can devise a plan or way whereby the bees can be caused to feed the queen abundantly at the time when brood is being crowded with honey and pollen, he will have the key to the situation, and be able to turn these things to a good account by causing them to be changed over into brood. But until such a plan has been devised, I will tell the reader how I treat these combs that happen to be filled with honey and pollen at times when it seems to be impossible to coax the bees and queen to work in harmony in turning these into brood at just the time the bee-keeper would wish them to.

The excess, if any, in pollen comes from hard maple, the same coming between the willow and apple bloom. At this time some colonies will fill combs almost solid full of pollen with more or less honey along the top edge of the frame, and I used to remove these combs at such times and put empty combs in their places, only to have them filled again in two or three days. Finding that I did not gain much here, I next put in dummies in place of the frames taken out, and when the sections were on, this would throw a greater force of bees into them, and thus as soon as any honey came from the fields it would go into the sections and remove the honey part of the pressure from the brood-combs. But, still later on with the advent of comb foundation, I would simply shove these combs of pollen and honey back toward the side of the hive, by removing an outside comb if necessary, and place a frame of comb foundation between the pollen and brood, and where honey enough was coming in from the fields to cause them to draw out this foundation the queen would fill it with eggs before the cells seemed deep enough for the bees to do such work at storing either pollen or honey in them, and thus I had brood where I should get only pollen and honey were I to put an empty comb in place of the foundation.

There is always something about drawing out foundation or building comb that sets the bees to feeding the queen more abundantly, and she in turn lays more vigorously than when no comb is built; and where combs can be drawn from foundation, or built from starters, there is usually no trouble in having them filled with brood; and where young brood is maturing rapidly much pollen is used, thus keeping the combs from becoming overloaded with pollen, and rearing a lot of bees for the harvest. But with me such large yields of pollen do not come more than once in two or three years, and when they come they do not last more than a week or ten days, after which the bees are generally anxious for brood; and what appeared as combs nearly spoiled because they were so full of pollen, very soon assumed a different aspect, and by the time the main honey harvest arrived there was little more pollen than was necessary in the hive. Onondaga Co., N. Y.

Honey as a Health-Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food", written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey". It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey the more honey they will buy.

PRICES, prepaid—Sample copy for a two-cent stamp; 50 copies for 70 cts.; 100 for $1.25: 250 for $2.25; 500 for $4.00; or 1000 for $7.50. Your business card printed *free* at the bottom of the front page on all orders for 100 or more copies. Send all orders to the office of the American Bee Journal.

See Langstroth Book Offer on another page of this copy of the American Bee Journal.

Our Sister Bee-Keepers

Conducted by EMMA M. WILSON, Marengo, Ill.

Increasing the Home Demand for Honey.

The Editor asks, "Why do not more families use honey? What can be done by bee-keepers to induce them to use it more than they do?"

I believe there is only one answer to the question, and that is the majority of bee keepers must first produce and sell their honey differently than they do now. I believe they are largely in the fault why honey is not used more.

The bee-keeper must not be above his business, but sell his own honey in his own city or village. Many a man ships his honey when the people in his own town or neighborhood ought to be eating it, but because it is not brought to them and their attention called to it they do not use it.

People like good food to eat, and will buy and use good honey just as they will fresh eggs and the best butter, and will be steady customers of the one who brings it to them. The most important of all is that the honey be ripe; not extracted until it is all sealed over; for honey taken any other way will not build up a market on a firm foundation that will grow and enlarge with time.

We have worked up a market in this way, and created a demand for honey in our part of the city and country where there was none to speak of before we came here. We are not dependent upon commission men or grocery stores to sell our honey. They do not know how to keep it, nor how to create a demand for it—they sell only to the demand already created.

We are happy that we can supply people with so healthful and delicious a food. The one that comes for a dime's worth is waited upon as pleasantly and carefully as if he had bought a gallon. I feel it a privilege to tell any one the many uses of honey besides using it on the table. How they could make their own vinegar, at small cost, and know it was pure, instead of buying the adulterated stuff at the stores that never ought to be eaten.

We never tire of honey, but eat it every day in the year; yet we know of bee-keepers who do not save enough for their own use, but sell it at a lower price than they pay for sugar. Surely, such bee-keepers ought not to expect other people to use it. There are months at a time without a pound of sugar in our house. On account of honey being the most healthful, we use it in all places where sugar is used except making jelly.

Fruit canned in sage honey is delicious, and when I mention it to others they wonder that it can be used for that purpose. I use enough to make a thick syrup on the fruit. Satsuma plums are especially nice that way, and usually opened when we have company. They are of a beautiful blood-red color. I never have any fruit spoil, but use only ripe honey, that was all sealed over before extracting. Unripe honey would not keep the fruit.

The Germans are the best honey-buyers, and the ones most likely to use it for cooking. They probably learned to use it in their native country. People learn more readily to use honey on the table than for cooking, and unless the price is a little lower than sugar there will not be much inducement to use it, so long as the market abounds in unripe honey. Sugar is always the same quality, but honey, bought from the stores, is almost always different in quality and flavor. One time it may be white but thin; sometimes sour; next time may be thicker, but dark and strong. Often it is granulated. Few know how to liquefy it, or want to be to the trouble of doing it. And some I have met had supposed it was spoiled when in the granulated form. Most people prefer mild-flavored honey because they are used to sugar which has no flavor. At first some do not like the flavor of honey in cooking. I did not, but after years of using it I have learned to like the flavor. We are afraid to use sugar.

About nine years ago we thought we could increase the sale of our honey by putting a label on every section, jar and pail of honey we sold, stating it was "Pure Mountain Sage Honey", and our name and address so they would know where to get more. We gave away hundreds of "honey cooking recipe" leaflets, but saw no increase in sales on that account. They probably regarded them the same as any other advertising leaflet. A part of the people do not read much. Another part do not heed if they do read. But the bee-keeper who retails his honey has a chance to educate all classes. Finally we dropped the extra labor of putting on the labels, as the honey was always sold by taste and did not seem to need them. Now I give the leaflets only to those who are interested sufficiently to use some of the recipes. The honey has always made the demand for the leaflets instead of the leaflets selling the honey.

Los Angeles Co., Calif. Mrs. C. W. Dayton.

Mrs. Dayton has given us many helpful suggestions in her very excellent letter. She tells what they have actually done, so she knows what she is talking about. If we all did as much as she has done about using honey for cooking, canning, etc., and trying to get others to use it, too, it surely would help materially in increasing the sales and prices of our honey. She says, "We are afraid to use sugar". Perhaps more of us ought to be afraid to use it, too. We might be if we were wiser.

No doubt she is right about people having to learn to like the flavor of honey in cooking. You know we have to learn to like many things we eat, and afterwards become very fond of. Why not the flavor of honey, especially if it is so much better for our health to use it?

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

LOVELY AND LOVABLE CALIFORNIA.

Prof. Cook is evidently not like the homesick individual who talks up his locality to sell out and get away. His words about California are the words of a sincere lover—and not a new, love-at-first-sight lover either. Lovable climate, inspiringly lovable scenery, deliciously lovable fruits, fraternally lovable people—not so phlegmatic and unresponsive as people in other States—and once a Californian never long contented anywhere else. But I have a brother who has recently lived six years in California, and previous to that a number of years in the Magdalena Mountains of New Mexico, and I find the fascinations of the Magdalenas stick to him more persistently than those of California do. Page 37.

CROSSWISE FRAMES AND CLOSED ENDS.

So Allen Latham thinks crosswise frames and closed ends are a pair that should go together, or not at all. Will not be very hard to agree on that—because, you see, most of us will take the second alternative. And while sitting on this contrary horn some of us would ask him whether he *believes* that story he told on three generations of our ancestors carrying stones on a horse's back to balance corn. I suppose he sits waiting for us to answer the question, Why not tilt our dwellings forward to keep the rain from driving in under the front door? Tolerably pert question that—even if his deductions are not any more correct than his stories. Page 37.

SHEEP IN THE APIARY.

It's quite a few years since I have had sheep within constant eyeshot, but it doesn't seem to me that they are much given to rubbing. So, Dr. Miller, I would suggest that their badness in moving hives comes not from rubbing but from their inclination to crowd one another. Whole flock, be it little or big, makes a "flying wedge" of itself. A sheep on one side, and toward the front, gets caught against the side of the hive, and then both sheep and hive are pushed sidewise by the joint force of the flock. Even when there are but three, two may get the third one fast and hold it until its struggles do mischief. Page 40.

APICULTURE IN THE DEPARTMENT OF AGRICULTURE.

Bad blood, cross purposes, personal ends, and queer statements—hardly worth while to afterthink them a great deal, if we can only leave them behind us effectively. How much apiculture has suffered from them! Mr. Benton's very valuable paper (page 41 and page 57) reminds of that once more—and happily does us some much better jobs, also.

Nice that it's the "nater of things" to grow! Entomology, which includes Apiculture, at Washington, not so very long ago was only a chair with one sitter—and he not a cent to use in any investigation under the sun. Entomology had the man; and Apiculture's share in the business was some interest and hope the man had toward it. "And she grows, and she grows," and after awhile we see two or more men. All were at work at Entomology; but one of them had, in addition to interest and hope, an excellent knowledge of bees. "And she grows, and she grows," and after awhile one man experiments, in a clandestine sort of way. He didn't do this with U. S. bees, for there were none, but with his own bees. "And she grows, and she grows," and at length (in a sporadic, "now you see it, and now you don't" sort of way) a modest appropriation comes just for once. "And she grows, and she grows," and as a finality Apiculture is now expected to have some money to work with every year. The chair has grown a Bureau; and the set of notions in the sitter's head has grown a Division of the Bureau.

CAUCASIAN RACE OF BEES.

And so the Caucasian bees are to have the first place on the stage in Uncle Sam's own apiary. Soon we shall have official knowledge of what their wonderful disinclination to sting amounts to, and whether their troublesome forwardness to swarm makes them undesirable when in the hands of a competent man. Page 58.

GIANT BEES AND THE PHILIPPINES.

When Mr. Benton went after the giant bees he didn't quite fetch 'em. But, that memorable first of May, Dewey, he fetched 'em. Now it's our duty, don't you see, to benevolently assimilate our new millions into the comforts and sweetnesses of Apiculture. So, when things grow a little more, it will be one of the simplest outcomes to have a U. S. branch apiary on Mindanao or Palawan, or some other island, and learn a heap of things about wax-culture with the giant bees. And then we must induct the much enduring Filipino into a new and profitable business—a business hopefully suitable for lazy folks like he'uns and we'uns. Page 59.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Difficulties in Answering Questions.

In attempting to make reply to questions coming from so many different sources, and covering almost the whole ground of bee-culture, one can not but feel the limitation of one's knowledge, and entertain some degree of fear lest harm be done by giving wrong replies. So it is a comfort to know that sharp eyes are upon this department, and that little error is likely to appear without being brought to light by some good friend.

It is not entirely clear to me, however, that there is anything incorrect in the reply on page 40, to which Allen Latham takes exception, page 126. Mr. Latham says:

"If it were late in the fall it would, indeed, be best to give the full comb of honey; but the question reads otherwise."

The question does not definitely state that fall or winter feeding is meant, but the question coming in January, and referring to no earlier period of feeding than "late summer", when bees were robbing, I felt warranted in understanding it to mean when brood-rearing had ceased. It hardly seemed necessary to give the caution not to destroy brood. Even if brood were present, it would be all right to give a comb of honey, and if it were desired to aid the nucleus with brood a comb of honey containing brood could be given. Candy is not advised to keep up brood-rearing, nor was it so intended.

Mr. Latham expects his nuclei to be ahead of his full colonies in swarming. Probably few can succeed so well with one-frame observatory hives. C. C. Miller.

◆

Highbarger's Record of Queens.

Referring to the sample given from record-book, page 121, L. Highbarger writes me his plan of keeping record. He says:

"A lath-nail driven in slightly at the entrance of the hive at the left hand side shows that there is present an unclipped queen. Driven in at the center it shows a clipped queen one year old. At the right, with another nail added, it shows that the queen is clipped and two years old, and that is as old as I care to keep queens.

"If you should come into my yard, I can give you the age of every queen, and tell whether clipped or not, merely by glancing at the nails. So when I go to clipping I don't need to open any hive except those with the one nail at the left. Of course, I have to look out for superseding."

A reference to page 121 will show that the nails would save the entry "03" in one place and "q cl" in another, but that is all. The remainder of the record would still be needed, and needed not at the hive, but in a book where I can look it up while lying on a lounge in the house or on the way to an out-apiary, or even ten years afterward. Neither would the nails aid me at the spring clipping (the one time in the year when a business of clipping is made), for without looking in the hive there's no way of telling whether the queen has been superseded or not.

For those, however, who do not care for other records, and want a quick way of knowing something about the queen in each hive, Mr.

Highbarger's method commends itself by its simplicity and convenience.

This gives me opportunity to mention an omission on page 121, probably due to the lack of anything within reach of the typesetter that would make the right character. June 13 the first super was given, and the blank left by the printer at that place should be filled with a plain square. C. C. MILLER.

Size of 10-Frame Langstroth Hive.

What is the size of a 10-frame Langstroth hive, with plenty of room for a dummy? KANSAS.

ANSWER.—18¼x10½x14⅞, inside measure.

Shipping Bees.

We are about moving to Minnesota, and have 6 colonies of bees which we would like to take with us. What is the best way to ship them? ILLINOIS.

ANSWER.—The important thing is to fasten hives in the car so they will not move. Put them in the car with the frames running parallel with the tracks. (In a wagon they should be crosswise.) If there is plenty of room, so that each hive can be on the car floor, nail cleats an inch thick onto the floor so as to hold the hives in place. If they have to be piled up, then a board from one side to the other may brace them. Have them at the end rather than the middle of the car. At this time of year a good-sized entrance closed with wire-cloth will give air enough, but in warmer weather more ventilation will be needed. Make sure that everything is fastened securely so no bees shall leak out.

Queens Mating More than Once—Dead Bees at the Hive-Entrance—Brood Dying in the Spring.

There is a rumor going the rounds that queens leave their hives to meet the drones after they have been mated successfully. Some very prominent apiarists insist that they have seen laying queens leave their hives the second time to meet the drone.

1. With your experience what importance, if any, do you attach to this matter?

2. If queens meet the drone more than once do you think this renders them more prolific than a single mating?

3. If by meeting the drone more than once queens become more prolific, will not the wing-clipper have to go?

4. Two colonies of equal strength, equal stores, queens equal in prolificness, packed exactly alike for winter, yet at the entrance of one ten times more dead bees are found than at the other. Why?

5. Will not some of the brood perish in the spring from natural causes? KENTUCKY.

ANSWERS.—1. I do not know of any case in my own experience, yet that does not prove that there is no such thing as second mating. Others claim to have seen it.

2. Probably a queen that has mated twice is no better off than other queens.

3. Clipping has nothing to do in the case. A queen is not clipped till after she begins laying, and I think no one claims that a queen ever mates after beginning to lay.

4. There may be a material difference in the age of the workers, or some other difference not easily recognized.

5. If I understand your question correctly, I don't believe there ought to be death of brood in a normal colony in spring if everything is all right. When brood dies there is probably something wrong.

Fastening Foundation—Stimulative Feeding—Making Hives.

I have been studying up some questions to see if I can stick Dr. Miller.

1. I have been putting foundation into a lot of frames, and having on hand plenty of good wax I have crossed the wires with quite a heavy layer of wax, and also have run some all along the inside of the frames, and allowed any that dropped on the frame or foundation to remain where it fell. Have I helped or hindered the bees?

2. In this State we are liable to have fine, warm weather early in the spring. Trees are all in bloom, grass growing, and everything as beautiful as can be. Then a fierce northwest wind comes along, and we have a freeze-up and perhaps snow—in fact, real winter weather in the summer. In such case what time would you begin to feed for stimulating?

3. In making hives (for Hoffman frames) I find that by making an 8-frame body just a little wider inside than standard width I can barely slip 9 frames in without a division-board, and that the sides of the hive will just hold the 9 frames snug together. Now, if one does not use a board in a 10-frame hive what is wrong with this 9-frame hive that can be used either under or above an ordinary dovetailed 8-frame hive? NEBRASKA.

ANSWERS.—1. It's not so hard to stick me as you suppose, but if you would stick the wax that you used to stick on the wires upon little sticks such as I use, your foundation would stick in the right place just as satisfactorily and without leaving at the bottom a space for the bees to stick their heads through. However, the bees will probably consider themselves helped rather than hindered by what you have done, provided you don't mind the time and wax used.

2. Very likely I wouldn't commence at all; I don't here. But if I did, it would probably be after the time of fruit-bloom.

3. The same thing that's wrong with a 10-frame hive with no division-board or dummy—too hard work to get out the first frame. If you don't want to get into the habit of using bad language, don't make more than one till you know how you like it.

What is Honey?—Are Bees Wild or Domestic?—Do Bees Hatch More than Once?

I notice on page 89 that Dr. Miller hardly thinks all liquid sweets gathered and stored by bees could be called honey.

1. If liquid sweets as gathered by the bees, clarified or rectified, distilled and digested in their laboratory, and stored in waxen cells is not honey, what is it?

2. Do bees belong to the wild or domestic animals? Much depends upon this fact, for all know that domestic animals deterioriate by inbreeding, and wild animals retain their original perfection. We are inclined to believe they belong to the wild.

3. My attention has been called to the word "hatch". Do bees hatch more than once? Would it not be better to have bees *hatch* once, and *emerge* to come into existence? ILLINOIS.

ANSWERS.—1. There is certainly a difference between a piece of comb filled with material gathered from clover blossoms and one filled with sugar syrup, no matter how much manipulated by the bees, and it is hardly to the interest of either the public or bee-keepers that the one filled with sugar syrup should be called honey. I don't know what is the best name for it—how would "sugar syrup" do?

2. They are considered wild when in hollow trees, etc., without any owner; domestic when in the possession of man.

Are you sure that all know that there is a distinct line between domestic and wild animals, making inbreeding wrong for the former and right for the latter?

3. You are quite right; it would be better to say that the larva "hatches" from the egg, and the young bee "emerges" from the cell. Indeed, you will find that quite often the word "emerges" is used in that way, although generally it is said that the young bee hatches out of the cell.

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Some Facts About Honey and Bees.—This is the subject of an article written by Mr. J. E. Johnson, and published on pages 581-82 of the American Bee Journal for Aug. 25, 1904. We have republished it in 4-page leaflet form for general distribution, and furnish it, postpaid, at 35 cents per 100 copies. Send all orders to the office of the American Bee Journal.

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Reports and Experiences

Bees Wintering Well.

I have been in the bee-business for 25 years, and, at the present writing, have 52 colonies in good shape. I pulled through one nucleus, with an 18-below-zero freeze at that. I would like to tell the readers of the American Bee Journal some facts I have learned about bees if the Editor would be pleased to have me do so. EVAN E. EDWARDS.
Madison Co., Ind., Feb. 27.

[Mr. Edwards, that is just what we want you and others to do—to send us interesting facts that have been learned in the management of bees. You are hereby invited to send in your share of those facts!—EDITOR.]

Zero Weather in Kansas.

We have had much zero weather lately, but it is now warmer and the snow is melting rapidly. The bees in my apiary seem to be safe so far, with abundant stores to last until warm weather. G. BOHRER.
Rice Co., Kans., Feb. 16.

Getting Bees Out of a Chimney—Feeding Bees.

Two or three years ago my brother asked "Our Dr. Miller", at the Chicago convention, the question, "How can I get a colony of bees out of a chimney without removing a brick?" The Doctor answered somewhat like this: "I don't know; guess the best way would be to turn the chimney upside down and dump the bees out".

Well, that might have been the simplest way, if the Doctor could have sneezed a tune up the chimney the way he did it for that convention. But we had perfect success by another plan, and this is the way we did it:

We placed a hive-body on top of the chimney, leaving only one entrance in front of the hive; then placed two frames of comb containing dead bees and a little honey right over the opening in the chimney, closed the hive except the entrance, fastened it with

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wire, and left it undisturbed until fall. Then I found the bees had "moved up", and a fine swarm they were. They filled a 10-frame hive chock-full. Placing an escape-board upside down on top of the chimney and under the hive, finished the job.

I used to buy bees in box-hives and transfer them, as per the text-books, but I don't any more; it's too uncertain and expensive.

Here is the way I got several good colonies just for the trouble, and a beginner could do it just for the experience.

I called on a bee-keeping farmer of the old school who I knew used the sulphur-pit method, and in the course of our conversation asked him if he had ever tasted honey without the sulphur flavor. He had not, and became interested when I informed him that if he had no objections I would take the bees home and leave him the old hive with its combs of honey free from any dead bees, brood, or sulphur gas. All I did was to drum the bees. mark the date, and make a second drumming 21 or 22 days later. The result pleased the farmer. By running one or two of the strongest colonies for extracted honey without the extracting, one is sure of good colonies with good winter stores; and if the transfer is made late, as I transferred one big colony last fall (the first week in November), only one drumming is necessary, using the escape-board and treating the box-hive as a super of honey.

Next spring, if you want to feed the bees some grist as a substitute for pollen, make an arrangement like this:

Select a pretty good cast-away hive with a portico, nail a lath across the lower edge of the portico and bottom-board, then nail a board to the back end for a leg to tip the hive to an angle of about 45 degrees; nail a couple of strips across the inside of the bottom-board, make an inch auger-hole near the top of each side, hinge the cover, and your "rabbit-trap" feeder is ready to be set down anywhere in the bee-yard, facing the south. Place a little flour in the portico for a starter; then cover the bottom thickly, and you will soon have a bad case of robbing. The lath on the portico catches the waste; the auger-holes are to let the bees out should the entrance become clogged, and the cover keeps out the rain and fowls or other molesters.

DER IMKER.

Bees Almost a Failure.

Bees in this locality have been almost a failure as far as profit is concerned.

The last two years they have done very poorly, and bee-supplies are so high, and honey so low, it does not pay to keep more bees than enough for our own use.

Benton Co., Minn., Jan. 30. E. L. COOK.

Bees Wintering All Right.

My bees are in the cellar and are all right so far, but we have very much snow and it is very cold—30 degrees below zero to-day.

I think there can not be too many reports and experiences in the American Bee Journal. I always read them first. I have had bees four years, and won't take $200 for what I have learned with the bees and in the "Old Reliable". A FARMER.

Vernon Co., Wis., Feb. 13.

Foul Brood and Its Treatment.

Foul brood has made its appearance in this county, the disease is spreading rapidly, and unless checked soon it will destroy the bee-industry in this locality.

My own experience is possibly about the same as others here who keep a small number of colonies.

Last spring I commenced with 10 colonies all fairly strong, owing to the mildness of the preceding winter. During the swarming season my number was increased to 19 hives. Discovering foul brood in one colony I destroyed it, but not before its weakness was discovered by the bees and the honey carried away. Later, on close examination, I found 8 colonies infected, all of which had plenty of honey to keep them, and even several sections full in the supers. However, I killed all those bees having foul brood and took the honey, but can't use it. Could it be treated so as to be fed to the healthy bees without endangering them? and can the hives and supers with the sections in be used if thoroughly cleaned and fumigated? One dislikes to burn good double hives even worse than to lose the bees.

How can the wax be extracted and made salable?

Several of your readers here would be interested in the answers to the foregoing questions, which we hope will be published.

Saline Co., Kan., Feb. 8. J. B. JOHNS.

[We referred the above to Mr. N. E. France, who replies as follows:—EDITOR.]

First, where did you get foul brood? That must be cured before your treatment will be successful. No need to burn or destroy any bees or hives to cure foul brood.

Honey from infected hives can be boiled so as to be safe to feed, but I do not recommend that you do so. Better eat or sell the honey for table use. It is not harmful for people to eat. If boiled to kill all disease it will be much darker and of poor flavor. Hives and supers, if scraped clean, are safe to use at once. The infected combs, after brood in them is hatched, should be melted by steam or boiling water, not in a solar wax-extractor. The wax is safe to make foundation from.

Treat infected colonies at the beginning of your honey harvest, using the McEvoy treatment. Be very careful all the time that all

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And last from 5 to 21 years
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T. F. BINGHAM, Farwell, Mich.

OTISVILLE, PA., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. FRED FODNER.

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LOSS BY LICE
on poultry amounts to many times the cost of Lambert's Death to Lice—the sure preventive. Loss can be saved and profit made by its use. Frees sitting hens from lice without harming eggs or chicks. A trial 10c box will prove it. 100 oz., by express, $1.00.
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infection in combs or honey is treated when and where bees will not come in contact with it. Avoid drug treatments.

Combs never having had foul brood in them are safe to use, and if cleaned perfectly by the bees of all honey, even if once over infected combs, they are safe to use.

N. E. FRANCE.

Severe Winter—Divisible Brood-Chamber Hives.

Until about Feb. 1 we had the finest winter for bees that could be wished for, but for the last 10 days we have had an almost continual blizzard with about 12 inches of snow, which drifted over the hives on the summer stands as fast as it could be shoveled away.

February 12 two colonies were found to be almost dead from want of air, and some others suffering. I then gave fresh air from above which seemed to quiet them. But Feb. 13 the thermometer stood at 28 degrees below zero and the snow was still drifting; Feb. 14 it was 15 degrees below and still storming; Feb. 15, 10 below, but still, and at noon 15 degrees *above* zero. Some hives were entirely covered with hard, packed snow. By the aid of a scoop-shovel I cleared away all the snow in front of the hives, and found all colonies in good condition except 6, which suffered badly for want of air, and were restless, some

Big Bargain 45 hives of BEES, about ⅔ 10-fr., rest 8-fr.; part hybrid; with Novice Ex., 12 qn-ex. zinc, veil, smoker, fdn fastener, 3 books—all for $100. All on stands in Bardwell, Ky. Quick if you mean business.
9A2t J. H. COLLINS.

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The Novelty Pocket=Knife.

Your Name and Address on one side—Three Bees on the other side.

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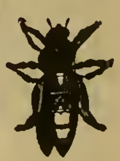
HONEYVILLE, O.



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Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

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bees having crawled above the cushions. All hives having divisible brood-chambers, that is, having 16 shallow frames in two supers instead of 8 regular Langstroth frames, were in excellent condition, bees being perfectly quiet and enjoying repose. This is the third winter that the divisible brood-chamber has shown itself to be better for winter, probably because bees could move easier from one comb to another in cold weather. In very cold weather they consume honey very fast, and any aid to their changing from the empty to a full comb is certainly a benefit.

Last winter was a very hard one on bees, and I lost 19 colonies, but none of those in divisible brood-chamber hives. All came out strong, and the first super of honey was from one of those hives. This kind of a hive has some drawbacks, but wintering is not one of them.

There is very little white clover in pastures as the blue-grass has crowded it out, or, at least, it appeared so last fall. So I do not look for a very good honey season. Basswood bloomed so heavily last year that we can not expect a heavy bloom this year; but if I fail to get any surplus honey it will be the first entire failure in 22 years.

Knox Co., Ill., Feb. 15. J. E. JOHNSON.

BEE-KEEPERS! Send me your orders for BEE-SUPPLIES for next year's use, and get the discount: Oct., 6 percent; Nov., 5 percent; Dec., 4 percent. The above discount does not apply to honey-packages. Send for catalog. W. J. McCARTY, Emmetsburg, Iowa
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Fastening Foundation in Sections—Selling Honey.

I can answer P. D. Jones' question on page 110. Buy a Daisy foundation fastener, and you will have little trouble.

I used poplar 4-piece sections last year, and had no trouble.

I had 13,000 pounds of honey last year. I am now getting 13 cents a pound for extracted, 15 cents for comb honey, and $20 per day. I do nothing but sell and deliver.

JOHN C. STEWART.

Nodaway Co., Mo., Feb. 12.

Selling Honey Conscientiously.

In answering a letter of mine (page 40) Dr. Miller accuses me of having a conscience. Herein lies my secret of selling honey. I mean always to have a name among my neighbors for keeping my word. If I have some poor, unfilled sections I sell them at what they are worth. If my sections turn out as we all like to have them, I charge accordingly. My motto is, "Absolutely pure" whether it is wax or honey. If I place sections on sale in the store with my name written thereon, it is understood that the honey was produced by my own bees.

I am in a small village in the suburbs of a large city. One of our wholesale houses receives annually a car-load of section honey. I can sell mine right alongside of theirs at a higher rate, because it is morally, as well as legally, pure honey. All it is necessary for me to do is to let it be known that I have honey to sell, and before I am aware of it it is all gone. Last season I sold out and sent to a friend for a case of honey. The honey was

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Forty Years Among the Bees, by Dr. C. C. Miller.—This book contains 328 pages, is pound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with 112 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard. The first few pages are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees. Price, $1.00.

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Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages; bound in paper, and illustrated. Price, 50 cents.

Bienen-Kultur, by Thomas G. Newman. —This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00.

Dr. Howard's Book on Foul Brood. —Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience Price, 30 cents.

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fine to look upon, and it was produced only about 8 miles from my home, but I could not sell it because I would not indorse it with my signature.

I am soon to deliver a little talk to some boys, and the base of my remarks is, "A good name is rather to be chosen than great riches". Is this not the sum and substance of a pure food law—something that you can swear is "morally", as well as "legally", pure?

Yes, fellow bee-keepers, if you would sell your small crops of honey at home to a good advantage, see to it that your own name among your neighbors is to be depended upon, that what you offer for sale is absolutely pure.

Worcester Co., Mass. C. R. RUSSELL.

Bees Wintering Well—Smoking Bees.

I have 28 colonies of bees and they seem to be wintering all right so far. We are having lots of cold, and more than lots of snow. We didn't get much No. 1 honey last year. There was plenty of white clover, but I think we had a rain that washed the nectar out.

I notice there is quite a difference in opinion as to the amount of smoke to use, some wanting lots and some none. I find that for my use my pipe furnishes about the right amount, only it is generally out when I want the smoke. I get to work with the bees and forget to keep it going. I usually keep my smoker lighted and handy, but seldom have to use it.

I haven't many bees, but I am the one that sells the honey here, thanks to the "Old Reliable". I have sold about $70 worth, and the most of that was comb honey at 10 cents a section. LYMAN NORTH.

Page Co., Iowa, Feb. 12.

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8 frame HIVES, either plain, or bee-way supers, $1.00. No. 1 Sections, $4 00 for 1,000. 24-lb. Shipping-Cases, $13 00 for 100; 12-lb., $8.00 for 100; 20-lb. Danz., $11.00 for 100.
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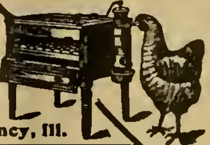

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250 Colonies of Italian Bees, with everything belonging to a first-class apiary, in one of the best localities in the State. 1903 crop over 40,000 pounds. Address,
N. STAININGER, Denison, Iowa.
9Atf Mention Bee Journal when writing.

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He will furnish at same prices as last year: Tested, $1; Untested. 75c; 5 for $3.25; 10 for $6; 15 for $8.25; 25 for $12.50; 100 for $45. He breeds Goldens, Carniolans and 3-Band Italians. Also 1, 2, and 3 frame Nuclei, and full colonies. Prices given on application. Pharr pays the freight, and guarantees satisfaction on all Queens. To do justice and judgment is more acceptable with the Lord than sacrifice. —(Prov. 3: 21.) 6Atf

BEES FOR SALE
I wish to sell 40 colonies of Bees. They are the Italian Strain, in a good, strong condition, and are wintering good. Reasons for selling: No time to take care of them. Will sell all, or 5 or 10 colonies. Inquire of
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7A4t PRESTON, IOWA.

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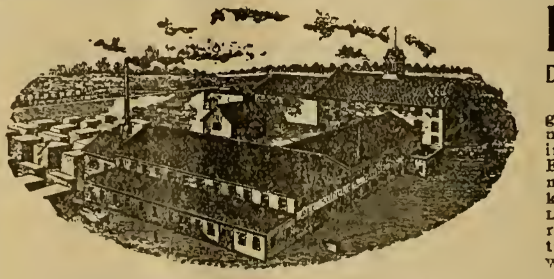

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CONVENTION NOTICES.

Illinois.—The Western Illinois Bee Keepers' Association will hold its spring meeting April 5, in the County Court Room, in Galesburg. Seasonable subjects will be discussed. Each meeting so far has been more interesting than the previous one, and we hope to continue that way. We earnestly invite all who are interested in this industry who are within easy reach of Galesburg, to be at this meeting.

E. D. WOODS, Sec.

Michigan.—The Northern Michigan Bee-Keepers' Association will meet in Lady Maccabees Hall, at Central Lake, Wednesday and Thursday, April 5 and 6, 1905. Hotel rates will be, The Tavern, $1.50 per day. Editors A. I. Root and W. Z. Hutchinson will be present; also E. D. Townsend, Geo. E. Hilton and a number of other practical apiarists of Northern Michigan If you have never attended a convention let us suggest that you try it for once, and you will have a higher opinion of your calling when you leave. W. MOHRMANN, Sec.

GEO. H. KIRKPATRICK, Pres.

Utah.—The Utah Bee-Keepers' Association will hold its spring convention in the Mayor's Office, City and County Building, April 7, at 10 a.m. All are invited Matters of great interest to bee-keepers, and horticulturists will be considered. Cache Valley's experience of killing the bees by poison spraying in the bloom must not be repeated. Jot down your thoughts on this or any other question, and bring or mail the same. G. E. GARRETT, Sec.

E. S. LOVESY, Pres.

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C. H. W. WEBER CINCINNATI ...OHIO...

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Honey and ✤ Beeswax ✤

CHICAGO, Feb. 20.—Honey-business is not too brisk and consequently prices are none too firm. A good deal of pressure is being made by producers as well as dealers upon their correspondents to move consignments. Fancy grades of white comb bring 12½@13c; No. 1, about 12c, with some desirable at 11c. Extracted, 6@7c for white, 5½@6½c for amber, the price being governed by quality, flavor and package. Beeswax, 30c, if clean and of good color.

R. A. BURNETT & CO.

BOSTON, Feb. 23—On account of the very light demand, stocks of comb honey continue to accumulate, causing a weaker market. Fancy white, 15c; No. 1, 14c. Extracted, 6@8c, according to quality. BLAKE, SCOTT & LEE.

KANSAS CITY, Feb. 25.—The honey market is still very lax, with scarcely any movement at all; the best white comb stock, 24 section cases, is selling here at $2.25 per case. Extracted moving all the way from 4½@6½c per pound, according to quality. We look for an improvement. Beeswax in good demand at 28c.

C. C. CLEMONS & CO.

CINCINNATI, O., Feb. 20.—The comb honey market has been a drag the last month; this caused the holders to offer extra inducements in prices. Quotations obtained are as follows: No. 1 fancy water-white comb, 12@13c; No. 2, 10½@11½c. Extracted: white clover in barrels, 6½c; in cans, 7½@8 cents; amber, in barrels, 5¼@5½c; in cans, 6@6¼c. Beeswax, 27c.

C. H. W. WEBER

PHILADELPHIA, Feb. 20.—On account of the very bad weather the sales among the retail trade in honey have been slow. Quite a good many shipments have been arriving from distant points and the market at the present time is overstocked. We quote: Fancy white comb, 15@16c; No. 1, 13@14c; amber, 12c. Extracted, white, 6½@7c; amber, 6c. Beeswax, 27c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

CINCINNATI, Feb. 17.—The demand for honey at the present time is like business—frozen. Nevertheless, we are looking forward to a brighter future. We quote amber extracted honey in barrels and cans at 6@6½c, respectively; white clover at 7@8c.

The conditions of the comb honey market are aught but encouraging, owing to the vast amount of Western comb honey that is being consigned at almost any price. We quote fancy white at 12@13c, with but few sales. Beeswax, 27c. THE FRED W. MUTH CO.

ALBANY, N.Y., Feb. 8.—Honey market dull this extreme cold weather, especially comb, which candies or granulates and cracks easily. We quote: Fancy white, 13@14c: No. 1, 12@13c; mixed, 10@11c; buckwheat, 10@11c. Extracted, better demand: Buckwheat, 6@6½c; white, 6@6½c. Buckwheat most in demand, as the Jewish people will have no other. Beeswax, 30@32c. H. R. WRIGHT.

SAN FRANCISCO, Feb. 21.—White comb, 1-lb. sections, 11@12 cents; amber, 8@10c. Extracted, white, 6@6½ cents; light amber, 4½@5½c; amber, 3¾@4¼c; dark amber, 3@3½c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

Not much inquiry, either for shipment or on local account. Market shows in the main an easy tone, especially for comb and the ordinary grades of extracted. Supplies of uncandied water-white extracted are not heavy, and for this description tolerably firm figures are being realized in a limited way, mainly on local account.

NEW YORK, Feb. 8.—The market is decidedly dull on comb honey and very little moving, with plentiful supply. We quote: Fancy white comb, 14c; No. 1, 13c; amber, 11c; dark, 9@10c. Extracted honey is in fair demand, and prices remain about the same. Beeswax steady and in good demand, 29c. HILDRETH & SEGELKEN.

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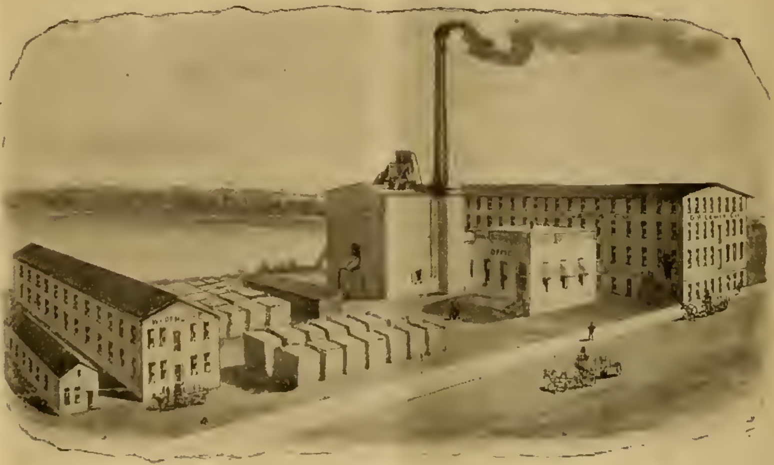

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WEEKLY

ARMS OF UT
M IRRIGAT

UTAH APIARIAN EXHIBIT AT ST. LOUIS, IN 1904.
(See page 198.)

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL
PUBLISHED WEEKLY BY
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334 Dearborn Street, Chicago, Ill.

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2d.—To protect and defend its members in their lawful rights.
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We have decided to offer TEN SPECIAL CASH PRIZES in addition to the regular premiums, for getting new subscriptions to the Weekly American Bee Journal. The 1st Prize will be $10; the 2d, $9; 3d, $8; 4th, $7; 5th, $6; 6th, $5; 7th, $4; 8th, $3; 9th, $2; and 10th, $1.00.

Read the Following Conditions Very Carefully:

1. This Special Cash Prize Contest will begin on the morning of March 20, and close the evening of July 1.

2. All who compete for the Cash Prizes must have their own subscription to the American Bee Journal paid at least to the end of this year (1905). And each one competing for a Cash Prize must have Five (5) new subscriptions to his or her credit before entering the contest for Cash Prizes. That is, those who have sent in 1, 2, 3 or 4 new subscriptions will not be counted as contestants for the Special Cash Prizes. You must have **5** to your credit, but need not send in the 5 all at one time.

3. New subscribers are considered as those who have not taken the American Bee Journal regularly since 1903. That is, any one who is not getting it now, but received it during 1904, would not be considered a new subscriber now.

4. A new subscriber must not be a member of the same family where the Bee Journal is being taken now. A new subscriber must be in fact a new reader.

5. Cash must accompany every order when sending in new subscriptions. And after any regular subscriber has sent in 5 new ones, he will say when sending in the sixth new one that he wishes to compete for a Cash Prize. Then we will enter his name on the Contestants' List. (If all is not now plain, please ask any questions and we will try to clear up anything that is not understood).

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Pierce's "Winter Problem in Bee-Keeping".
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Doolittle's "Scientific Queen-Rearing" (bound in cloth).
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Prof. Cook's "Bee-Keeper's Guide; or, Manual of the Apiary."
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The business for many years conducted by George W. York & Co., at 144 E. Erie Street, as agent for The A. I. Root Company's supplies, is this day transferred to The A. I. Root Company, to be conducted as a branch office. Please note change of name to avoid confusion in our work. THE A. I. ROOT CO.
October 1, 1903.

To Our Customers and Friends:
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GEORGE W. YORK & CO.
Chicago, Ill., Oct. 1, 1903.

The conveniences offered by the branch office were evidently appreciated by the bee-keepers of Illinois, Wisconsin, and other States beyond, for the business done by the branch was much beyond our expectations. During the rush season—April, May and June—orders came in so fast that, in spite of frequent orders to the factory for another car of goods, the stock ran low, and some delays and annoyances thereby were caused. Some little confusion because of change of name and manner of conducting the business (from agency to branch office), but these have all been overcome. We are better than ever prepared to handle your business carefully and promptly, and solicit your patronage.

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Extracted Honey.

In the course of a year we use large quantities of extracted honey, and are pleased to get sample and prices from parties who have honey to exchange for supplies. We are also prepared at all times to furnish first-class honey to any one who is in need of same, either bee-keepers who have a demand for more than they can furnish, or from dealers. Get our prices before you place your orders elsewhere.

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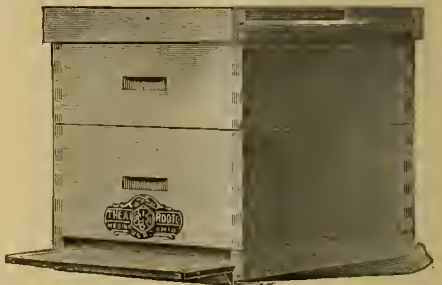

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BEE JOURNAL
Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor. CHICAGO, ILL., MARCH 16, 1905. Vol. XLV.—No. 11.

Editorial Notes and Comments

The Third Double Number So Far This Year.

Yes, this is the third double number of the American Bee Journal for this year, making 48 extra pages already, and it is only the middle of March. That is almost one-seventeenth more pages than we agree to furnish during the year for one dollar, for the regular issue is 16 pages weekly. But we are glad we can publish these occasional double numbers, for we believe they are appreciated very much by our readers.

Midwinter Flights of Bees.

Strictly speaking, when midwinter flights are spoken of in connection with cellar-wintered bees, midwinter is not really meant, but February or early March. C. Davenport, in Gleanings in Bee-Culture, mentions what may help to account for ill effects of these flights in some cases. He says the bees should be returned to the cellar on the evening of the same day after their being taken out, or, at most, not later than the next day. Left out longer they are likely to start breeding. So the ill effects of midwinter flights *may* have come from leaving out too long.

The Contents of the Brood-Chamber.

In order to judge properly whether all is as it should be inside a hive, the beginner should have some idea what to expect when he opens it. Upon this point the books are to a large extent silent, leaving him to gain the desired knowledge through a series of observations extending through one or more years. Indeed, after many years of observations it may not be the easiest thing for him to give anything like a definite answer in a few words to the question, "What ought I to find upon opening a hive?" In no two hives will exactly the same thing be found. What is found to-day will be different from what was found in the same hive at the last inspection. But at least an attempt may be made to enlighten the inquiring neophyte in a sort of general way as to what he may expect to find in a bee-hive.

If the bees have been left to their own devices, there will be found drone-comb in different places, amounting to the half or the whole of a full frame. If the bee-keeper has controlled, there may be nothing but worker-comb in the hive, or, at most, two or three square inches of drone-comb in one of the outer frames. Drone-cells are not likely to contain brood except in times of prosperity when honey is coming in. At other times they may contain honey, but not pollen.

The queen in a colony wintered outdoors is likely to begin laying a few eggs in February—sometimes even in January. If a colony is cellared, it is not likely to have brood started much, if at all, before being brought out of cellar. The queen begins with a very few eggs daily, a compact cluster being in the center, or warmest part of the hive. By and by eggs and brood will be found in two or three frames, the whole being no more than would easily go in one frame, which means that the queen may be laying at the rate of about 300 eggs a day. When she gets to laying 1000 a day, she will have four frames fairly well filled with brood—at least they would be called well filled, although little more than three-fourths of their actual capacity. With 1500 a day—many queens will not go beyond this, while some will more than double it—she will have six Langstroth frames well occupied, and this a fairly good queen will reach by the last of May in the North.

Looking into the hive at this time, there will be found a brood-nest of a somewhat globular form, the central frames being a little fuller than the others, a band of honey being at the top and at the two ends, although a good queen may have brood clear to the top-bar. There may and there may not be some pollen in the upper part of these frames, but the frame next them at each side will have a good supply of pollen as well as honey. In a 10-frame hive it is not a very common thing to find brood in the outside frame at each side, but in an 8-frame hive the queen will often insist upon occupying a good part of the two outside frames.

This amount of brood will be found kept up pretty well throughout the season, but toward the close the sphere of brood will gradually become less and less, the space left vacant by the brood being filled with honey and pollen, and somewhere in September or October all brood-rearing ceases, and all the combs should be found filled with honey and pollen except the lower portions of the central combs.

Thus a rough sketch is given as to what may be found in a hive at different times, subject to innumerable variations, and no one must understand that any attempt at exactness has been attempted. Dates must be changed for the South. Neither must any beginner understand that 8 or even 10 frames make the limit for every queen. If given the opportunity, there are queens which will occupy 12, 14, or more frames.

The National Association and Incorporation.

Dr. C. C. Miller has this to say on the subject of incorporation of the National Bee-Keepers' Association:

> I am glad, Mr. Editor, to see the matter of incorporation of the National discussed in your columns. I don't know all about such things, but so far as I can judge from what is said on page 115, the weight of argument is on the side of incorporation. After incorporation we would not be obliged to engage in a lawsuit any more than we are now. In the case mentioned, the Ladies' Home Journal, I think there was no lawsuit on the part of the incorporated concern; merely a request for retraction, the same as was made by the National. Prompt and satisfactory apology was made in the case of the incorporated concern *because it was incorporated*, and it was not made in the other case *because it was not incorporated*. If we had received the same treatment as the incorporated concern, would not this one case have paid for the cost of incorporation several times over?
>
> Again I repeat that incorporation does not oblige us to engage in lawsuits. Yet I can not believe it would be so very hard to prove that individual members of the National were damaged a fixed amount by some of the things that have been done.
>
> The National, in one of its former states of existence, was incorporated. If it did no good it certainly did no harm. Would it do any more harm now?
>
> C. C. MILLER.

We think the principal question to be decided before incorporating the National is this: Will the Association take any advantage of the added power and responsibility? If not, why not remain as it is?

There is a committee on incorporation that will report at the next annual meeting of the National. No doubt they wish to get the views of the members. Dr. Miller is on that committee, we believe.

A Bee-Keepers' Paradise.

The paradises for bee-keepers that we sometimes read about and sigh for will probably turn out generally, upon close acquaintance, to be no more paradisaical, all things considered, than the places we are already occupying. Arthur Laing, in Canadian Bee Journal, besides the mention of scorpions, centipedes, frogs, land crabs and fleas, which one of the paradises enjoys, has this to say:

> Jamaica has been described as a "bee-keepers' paradise", but I am becoming more and more satisfied every day that we have in Canada a better chance for success as bee-keepers than we would have in Jamaica. I do not believe that the annual average yield would be over 100 pounds per colony; in fact, was told to-day by a gentleman who has 400 colonies of bees, that his best average in any year had been 84 pounds per colony, and last year, after the hurricane, he averaged only 42 pounds, and this honey, mind you, will not bring more than from 2½ to 3 cents per pound above the cost of package, and out of this the expenses of the apiary must be paid, so that the apiarist here must keep at least three times as many bees as our Canadian apiarist in order to make the same money. Then just think of three times the number of hives, barrels, extractors, honey-knives, smokers, etc., that have to be bought, and the extra help that must be paid for. Lumber for hives costs from $50 to $60 per 1000 feet.
>
> Money can undoubtedly be made here by bee-keeping, but, in all sincerity, I say again, we Canadian bee-keepers have a better opportunity in Canada than we would have in Jamaica.

Honey Definitions by the Government.

Circular No. 13, by the United States Secretary of Agriculture, entitled "Standards of Purity for Food Products", has been received. Especially interesting to bee-keepers are the following definitions that may be considered authoritative, though not beyond the possibility of modification in the future:

> 1. *Honey* is the nectar and saccharine exudations of plants gathered, modified, and stored in the comb by honey-bees (*Apis mellifica*). It is lævo-rotatory, contains not more than twenty-five (25) percent of water, not more than twenty-five hundredths (0.25) percent of ash, and not more than eight (8) percent of sucrose.
> 2. *Comb honey* is honey contained in the cells of comb.
> 3. *Extracted honey* is honey which has been separated from the uncrushed comb by centrifugal force or gravity.
> 4. *Strained honey* is honey removed from the crushed comb by straining or other means.

It is perhaps a matter of regret that in the list of vinegars, honey-vinegar is not included.

Shaken Swarms in 1865 and 1880.

On page 19 we called attention to the fact that Mr. Geo. W. House, of New York State, described his method of shaken swarms in 1880, in the Bee-Keepers' Magazine, published at that time. Mr. Geo. M. Sowarby, of the same State, now requests us to republish Mr. House's method, which request we comply with. It is as follows:

> As soon as a swarm has made preparations for swarming by having eggs deposited in the queen-cells, we proceed as follows: Remove the old colony a few feet one side, and on the old location place a new hive (either empty or the frames filled with foundation), put a small block between the lower front edge of the hive and the bottom-board (to give the bees an easy access to the hive), and place a wide board in front of the new hive, with one edge resting against the bottom-board while the other edge rests upon the ground, so the bees may run up and into the hive.
>
> We now open the old hive and draw a frame a little one side from the center of the hive, and after looking the comb carefully over to ascertain if the queen is thereon, we turn to the new hive, and. by a little sudden jerk, we shake nearly all the adhering bees on the board in front, and they readily enter their new house.
>
> Setting this frame in the shade of a near hive (that we may have easy access to the frames to work), we return to the old hive, and draw the next frame towards the center, looking for the queen and shaking the bees in front of the new hive, as we did with the preceding frame. Replace this frame in its original place, and proceed as with the preceding frame, until you have two-thirds of the bees from the old colony into the new hive. As soon as you find the queen, take her from the comb and place her at the entrance of the new hive and let her run in with the bees. Now close the old hive and contract the entrance, and remove it to a new location.
>
> By this time you may remove the wide board in front of new hive, so that the old location will not be disfigured, and the working bees will lose no time in entering the new hive.
>
> The next day give the old swarm a queen-cell that will hatch within 48 hours, and the work is done.
>
> A laying queen may be introduced instead of a cell if desired. The first few swarms will furnish us with queen-cells of the most perfect type. But we generally make a few swarms about ten days before we wish to use the cells, and claim there is no difference in queens reared from larvæ from two to four days old and those reared by the queen depositing the egg in the cell. This is during the swarming season.
>
> The day is not far distant when the apiarist that can manage the most bees, in the same length of time (all conditions equal), will be considered the most skillful and the most successful. In artificial swarming on the above plan, you will notice we secure our new swarms at least a week sooner than we would by allowing them to swarm naturally, and in the old hive we have a laying queen at least five days earlier than we would by allowing them to hatch their own queen—two very great items during the honey season. Swarms having extra qualities we allow to rear their own queen-cells, that we may use them in other hives, thus improving the qualities of our bees.
>
> After a few days I claim there is no one that can discover the difference between such a swarm and one that swarms naturally. We have practiced this mode of swarming for the past 15 years, and are satisfied there is no plan that surpasses it, where you wish to have one new swarm for each old one. GEO. W. HOUSE.
>
> Onondaga Co., N. Y., April 12, 1880.

Miscellaneous News ✣ Items

Mr. Eugene Secor so often becomes delightfully rhythmical that bee-keepers are seldom surprised at his poetic productions. They are always so good. Here is one of his latest:

Pussy Willows.

By the brook that skirts the pasture
  Pussy willows scent the breeze
Long before the sleepy linden
  Wakes to tempt the honey-bees.
April woods are bare and brown,
  But the willows—pussy willows—
  Shake their dainty, fluffy pillows,
Soft as beds of eider-down.

All the wealth of love and service
  Are not lavished on the great.
In the scales of the Eternal
  They are least who lag and wait.
Bare and brown the giant trees,
  But the willows—pussy willows—
  Early shake their golden pillows,
Serving hungry honey-bees.

Winnebago Co., Iowa. EUGENE SECOR.

* * *

On the Death of Geo. W. Brodbeck.—We have received the following resolutions, which were passed by the stockholders of the California National Honey-Producers' Association at their regular annual meeting, Feb. 15, 1905:

> WHEREAS, it has pleased the Great Ruler of the universe to remove from our midst our esteemed president and brother bee-keeper, Geo. W. Brodbeck; therefore, be it
>
> *Resolved*, That we sincerely mourn our loss, and will long cherish his name and remember his many kind deeds and persistent endeavors in behalf of ourselves and the bee-keepers at large. We hereby tender our sincere sympathy to the bereaved. May the softening influence of time remove the grief, and simply leave happy thoughts of his kindly life.
>
> *Resolved*, That a copy of these resolutions be sent to Mrs. Brodbeck, and to the press for publication.
>
> GEO. L. EMERSON, }
> T. O. ANDREWS, } *Committee.*
> G. F. MERRIAM, }

* * *

Not a "Fellow".—Mr. E. Brubaker, of Philadelphia Co., Pa., has sent us the following stanza, taken from a Philadelphia newspaper:

The roving bee is often called
  A bold, bad robber fellow;
But for the sweets from honey-bloom,
  He pays in gold-dust yellow.
—CORA LAPHAM HAZARD.

That's all right, except that the "roving bee" referred to is usually not a "fellow".

* * *

Utah and Other Apiarian Exhibits at St. Louis.—On the first page we present a picture of the Utah apiarian exhibit at the World's Fair held in St. Louis last year. Some weeks ago we presented a picture and brief description of the Colorado apiarian exhibit. Mr. E. S. Lovesy, of Utah, sends us the following concerning the Utah display:

> We sent nearly 4 tons of alfalfa, sweet clover, and some white clover honey for the Utah exhibit at the World's Fair at St. Louis. It consisted of 300 pounds of comb honey and about 3¾ tons of extracted, collected from 12 counties and about 20 different localities of the State. There were about 2 tons of beautiful white alfalfa honey put up in large glass jars, some of them holding about 100 pounds each. This is too large a package to put on exhibition. Had the contents of one of those jars been put up in 1 or 2 pound jars it would have shown up clear and water-white. The light amber was put up in smaller jars, with the result that it looked whiter than the best white

in the large jars. But this light amber honey would have looked dark in those big jars.

Our object was to represent correctly the honey product of the State. Our honey will easily go 2 to 1 white, and if it had been reliquefied at the Fair, and put up in smaller jars, the effect would have been all that could have been desired. The only excuse we can offer is that those who managed the exhibit thought they were doing everything for the best, and the bee-keepers had nothing to do with the exhibit other than to collect the honey, fill the jars, and deliver it to the Fair commissioners. Moral: Don't exhibit honey in bulky packages. They are too heavy to handle, and don't show up well.

The unique wax-model, representing a maiden on the mountain-top holding aloft a horn of plenty, which was intended to represent the industries of the State—including its mining, agricultural, horticultural and apicultural industries; also the American flag, which, with the bee-hive, is the emblem of the State—was the creation of one of our local artists. E. S. LOVESY.

Salt Lake Co., Utah.

The British Bee Journal, in January last, contained quite a full report, prepared by Mr. Walter F. Reid, of the apiarian exhibits from various counties, as shown at the St. Louis Exposition. Mr. Reid reported the following:

In the Exhibition there were many exhibits of bee-products, some of them of considerable importance. Several foreign countries were represented, and some of the American States had special honey exhibits.

France had a very small exhibit, consisting of a few jars of excellent Narbonne honey and a defective "Gariel" hive.

Madagascar exhibited four cakes of beeswax of pronounced odor, three of which were of good color.

Reunion showed three bottles of honey of fairly good color, but indifferent flavor.

Germany did not exhibit any bee-products; but Prof. R. Klebs, of Konigsberg, showed a unique collection of insects in amber, some of which were mounted in a resinous mixture of the same coefficient of refraction as the amber, so that the specimens could be easily studied. Among the 68 exhibits were several apidæ. One was a new species of bombus, while another represented a hitherto undescribed apis much resembling our honey-bee, but slightly larger. Although the pollen-baskets appeared to be fully developed, yet the compound eyes met on the top of the head as in the drones of the present day, leaving a small triangular space on the forehead in which three single eyes were placed. The upper part of the thorax has a thorny appearance, and seemed devoid of hair. The collection included eight vespidæ, which, in their general structure, reminded one of South American forms.

Bulgaria showed three samples of candied honey of fairly good quality, and three cakes of wax.

Argentina had three exhibits of honey, one of which, apparently from alfalfa, was of good quality. One cake of wax was also exhibited.

Nicaraugua exhibited a cake of nearly black wild beeswax, and also some interesting specimens of vegetable wax, obtained from the berries of a shrub with leaves resembling those of the myrtle.

Mexico had a good exhibit of wax from several provinces. Some large cakes of bleached wax from Jalapa were of excellent quality, and there were good samples from Matamoras and Vera Cruz. Some of the native beeswax was of very dark color, resembling cakes of chocolate.

Cuba exhibited a few samples of indifferent honey, packed in wine and champaign bottles! Only one from Guantanamo would be considered of average quality in this country.

Philippines—The United States had a large collection of Philippine products, including about 25 specimens of wild beeswax of various degrees of purity, and a number of home-made wax-candles as used in the churches. The wax was said to be derived from two kinds of bees, one a large variety, probably Apis dorsata, and the other a small bee of about the size of a house-fly, and striped black and yellow, more resembling a wasp than a bee. The cells of the small combs were about ⅛ inch in diameter, and the native name of the bee was "Putyucan".

Japan's exhibit of honey was remarkable for careful and tasteful packing. Some jars—or, rather, stoppered bottles—from the Suwa apiary, Osaka, were specially neat. The hive-bee is said to have been introduced about 100 years ago from Spain; but wild bees existed previously in the Japanese forests.

Canada had a splendid trophy of honey, both extracted and in the comb. About 50 exhibitors had contributed towards this collective exhibit, which weighed about one ton.

Among the States of the Union, Colorado had a very fine exhibit of honey, chiefly collected by Senator G. W. Swink, who owns a number of apiaries. The quantity of honey shown was considerable, being about two tons of section and one ton of extracted honey. The whole of it was of good quality, and there was also some excellent beeswax.

Utah showed a collective exhibit of about 5000 pounds of excellent alfalfa, packed in large glass jars 4 feet high and 9 inches in diameter, with glass lids.

California would have made a better show had her exhibits not been split up into counties. San Diego County showed some good white sage honey, and Los Angeles some extra-large sections of good quality. More than 100 sections from Fresno contained good honey, but were badly finished, judging by our standard, and the same may be said of a number of sections from Sacramento. Perhaps the best exhibit of extracted honey was from Los Angeles County, packed in clamped jars.

Nebraska.—The custodian of this exhibit, Mr. Wm. James, is himself a bee-keeper, and gave some interesting information upon the bee-keeping industry in that State. The chief sources of honey are alfalfa, white clover and heartsease (*polygonum*). Langstroth 8-frame hives are chiefly used, and the yield of honey averages about 45 pounds per colony. A large number of samples of honey were shown, which had been collected and arranged by Mr. Stilson.

Arkansas was represented by only one jar containing comb and honey mixed, the flavor of which was good. There seems to be an opinion that the flavor of honey is improved by an admixture of comb.

Missouri had a large trophy of honey, badly staged, the sections being shown in the packing-cases. Some honey was exhibited in stoppered bottles, and was very deficient in flavor of any kind.

Kansas showed a few samples of alfalfa extracted honey of average quality.

Mississippi had both honey and wax exhibits. Some of the honey was from the *melilotus* [sweet clover], and of excellent quality. The *melilotus* was said to have been introduced before the alfalfa, which latter is now supplanting it. Six samples of wax appeared to be of good quality; but it is difficult to judge wax when the temperature is above 90 degrees Fahr.

Iowa staged about half a ton of section honey of average quality but no extracted honey. About 1 cwt. of good wax was also shown.

Louisiana had a small exhibit of ½-pound jars of honey marked "Goldenrod", "Morning-Glory", and "Willow", of which the last had the finest flavor.

Oregon was represented by a small quantity of inferior honey. It is said that the honey gathered near the coast is inferior in quality to that obtained further inland.

Idaho had a small exhibit of sections arranged in fancy design.

New Mexico showed about 100 sections and 50 pounds of extracted honey, chiefly alfalfa. The bulk of this honey was produced at a height of 3600 feet above sea-level. The chief apiarist owns about 1000 colonies. When he arrived at the place where his bees are now located his whole belongings consisted of two wagon-loads of hives and a tent, and he is now a prosperous colonist.

There were very few bee-appliances exhibited at St. Louis. The A. I. Root Co. had an exhibit of well-made goods familiar to bee-keepers, but which contained nothing new except a novelty in form of a smoker without a nozzle.

There were three colonies of bees in the Horticultural Building, of which two were of the Italian variety. It was remarkable that while the humming-birds drove away both butterflies and native bees from the beds of flowers in the exhibition grounds, they took no notice of the hive-bees. Up to the middle of October the bees were still bringing in honey from numerous wild flowers, especially goldenrod and aster—a small Michaelmas daisy. WALTER F. REID.

* * *

Baiting Fish with Honey.—Honeyed words have often lured foolish members of the human family to their ruin, but we have never known a member of the fish family to be lured by a honeyed hook, though good Isaak Walton is authority for the catching of tench with "a bait made of a paste of honey and brown bread".

The office boy has tried to improve the above sentiment in this "poetical" fashion:

Brown bread and jelly-cake
Makes a fellow's belly ache;
Brown bread and honey-paste
Just suits a fish's taste.

The last line is "bum", but it is excusable, as the "boy" is not yet a full-fledged poet—his hair is yet clipped quite short—for obvious reasons.

* * *

Doolittle & Clark is the way it reads now, instead of simply "G. M. Doolittle". The strenuous life that Mr. Doolittle has been leading for so many years has compelled him to share the labor as well as the pleasure of his business, and so he has associated with him Mr. P. G. Clark, who is a practical apiarist. They will hold forth at "the old stand" where Mr. Doolittle has lived for over 30 years—at Borodino, N. Y. See their advertisement on another page.

* * *

The Pacific Rural Press has been designated by the State Grange Executive Committee as the official organ of the State Grange of California.

Honey as a Health-Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food", written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey". It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey the more honey they will buy.

PRICES, prepaid—Sample copy for a two-cent stamp; 50 copies for 70 cts.; 100 for $1.25: 250 for $2.25; 500 for $4.00; or 1000 for $7.50. Your business card printed *free* at the bottom of the front page on all orders for 100 or more copies. Send all orders to the office of the American Bee Journal.

See Langstroth Book Offer on another page of this copy of the American Bee Journal.

Opinions of Some Experts

Should the National be Incorporated?

Ques. 23—*Do you think it desirable that the National Bee-Keepers' Association should be incorporated?*

JAS. A. STONE (Ill.)—Yes.

J. A. GREEN (Colo.)—Yes.

WM. MCEVOY (Ont.)—Yes.

O. O. POPPLETON (Fla.)—Yes.

G. M. DOOLITTLE (N. Y.)—No.

S. T. PETTIT (Ont.)—I do not know.

N. E. FRANCE (Wis.)—Not at present.

C. DAVENPORT (Minn.)—I do not know.

EUGENE SECOR (Iowa)—I doubt if it will pay.

REV. M. MAHIN (Ind.)—It seems to me desirable.

MORGAN BROS. (S. Dak.)—Yes, all things considered.

DR. C. C. MILLER (Ill.)—With my present light, yes.

E. S. LOVESY (Utah)—I think it would be desirable if it should be incorporated.

P. H. ELWOOD (N. Y.)—I am not informed as to advantages and disadvantages.

E. E. HASTY (Ohio)—Quite open to conviction on this point, but rather think not.

PROF. A. J. COOK (Calif.)—I see no harm, and I can see great possible advantages.

E. D. TOWNSEND (Mich.)—There is work ahead for the National to do, so it will be necessary to incorporate.

E. WHITCOMB (Nebr.)—Incorporation is of no advantage unless we desire to acquire property; to sue and be sued.

R. C. AIKIN (Colo.)—Yes, if we want legal standing. But I am not a lawyer, nor have I thought much on the subject.

C. P. DADANT (Ill.)—It can do no harm, and will give more authority to the officers, the General Manager especially.

DR. J. P. H. BROWN (Ga.)—If the Association has any property, or intends to do a business, it would be better to have it incorporated.

R. L. TAYLOR (Mich.)—Yes. Without incorporation it can neither sue nor be sued. Pleading the "baby act", as it is called, is not looked upon with favor.

ADRIAN GETAZ (Tenn.)—Yes. It would enable the Association to carry legal business in its own name, and under its own responsibility. In a word, using legal terms, it could sue and be sued.

G. W. DEMAREE (Ky.)—I do not think so. The good work that has been accomplished by the bee-keepers' societies all over the country is the result of unselfish commingling with the people of all rural pursuits.

L. STACHELHAUSEN (Tex.)—I do not see how the Association could be incorporated except a capital for some business purpose is raised and the members become share-holders. As the Association does no business of this kind as yet, I do not see a possibility or a purpose for incorporation.

C. H. DIBBERN (Ill.)—This is a legal question rather than an apicultural one. Yes, I think it should be incorporated, to give it legal standing in court. Necessarily, to carry out the intentions and purposes of the Association, many legal questions will come up for solution, and the Association is constantly at a disadvantage without incorporation.

A Queen-Bee Free as a Premium.—We are now booking orders for untested Italian queens to be delivered in May or June. This is the premium offer: To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us one new subscription with $1.00 for the Bee Journal a year. Now is a good time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

HYBRID BEES AND FAIR PREMIUMS.

And so hybrid bees have an unbroken record of 20 years—taking every first premium for comb honey at the Nebraska State Fair for that time. Noteworthy. I'll venture to guess that this fact does not mean exactly what it seems to mean at first view. I infer that very little honey stored by pure blacks ever comes in—pure blacks so very scarce—thus making it a race between Italians and hybrids. As to the hybrids, presumably one type of them finishes up its honey much as Italians do; while another type of them does it so nearly the same as black bees do that one could scarce tell the difference. The prize-winners belong to the latter type, I take it. Page 61.

SYRIAN BEES AND QUEEN RECORD.

And the Syrian bees (as vised by Prof. Benton) seem to hold the record for manipulation of queens. He doesn't appear to say whether they were all at liberty at once, or only part of them, but there were 250, and at least a great part of them at liberty at once. Suspicious. Suspicious because it seems to be a going back to a state of things existing before the bee had attained its present high and peculiar state of development. A colony of bees which inclines to build very few queen-cells—and in which two virgins are pretty sure to settle matters at sight with a mortal combat—*may not* be any better than the colony where the opposite state of things prevails, but the probability lies in that direction, I think. Degeneracy and atavism are things to watch out against. Page 64.

BLACK FOUL BROOD AND ITS SPREAD.

Mr. Stewart's paper on black foul brood is a very lucid one. And when the disease *seemed* to leap four miles through the air he proved beyond reasonable doubt it seems that bees from diseased apiaries were there. This appears to settle it that it is bees that carry the germs, either in their honey-stomachs or about their bodies somewhere. This is a contribution of considerable magnitude to our knowledge of black brood. When infecting germs *do* float in the air it is desirable to know that fact; but we don't want to know it when it isn't so. Not only in bee-diseases, but in other diseases also there is a bad, lazy tendency to assume that infection must have traveled in the air when other possible routes have not been half explored. Page 65.

BEE-PARALYSIS NORTH AND SOUTH.

O. O. Poppleton draws a decided rein on a prevalent dictum, on page 69. Paralysis more prevalent in the South not because Northern summer climate is unfavorable to it, but because Southern winters don't kill off the infected colonies and Northern winters do. I am not sure that this view of the case is the whole story, or even half the story; but it is worth thinking of at least. I do not remember to have seen it in print before, that unusually tight clinging to the combs is a prominent sign of paralysis. I suppose this is in part because the diseased bees have never done any work, and therefore the original sharpness of their toes has never been dulled. It is of interest that Mr. Poppleton finds sulphur an effective cure—and yet he thinks the better tactics to be to pull down the diseased colonies and build up healthy nuclei with the proceeds.

TEXAS AND HER FLOWERS.

Happy Texas! Has 13 months of flowers in a season! This is not wholly a joke, as it is not claimed that there are 13 months in a year. Just notice the possibility of a season being somewhat longer than a year—the too-previousness of the mistletoe and the persistent ever-blooming of the cotton spreading things beyond the calendar sometimes. But alas—

> Nor bee nor bee-keeper can hunt
> To make flowers give down when they won't.

And horsemint, which we used to think of immediately when Texas honey was spoken of, is over large areas much less abundant than formerly. Prof. Scholl lays this to several successive dry years cutting off the supply of seed. Quite likely he is right in the main; but Nature has many such pranks, and some of them can not be solved so easily. In my range there used to be square miles of blue lupines. This was on "oak openings" sort of land—and much of the territory would have yielded a good swath of lupines if mown with a scythe. Now there are only scattered plants, and here and there a spot where they are close enough to be neighbors. What's got my lupines—and will they ever come back? Rest of us can hardly find a match for the Texas mesquite, which has two distinct periods of bloom, the second beginning when the beans from the first bloom are getting ripe. Say, that makes two seasons—two seasons in one year. And we wind up as we began, saying: Happy Texas! her seasons are a month longer than elsewhere in the world—and, indade, there are twice as many of them! Page 85.

Northern Michigan a Bee-Keepers' Paradise.

By W. Z. HUTCHINSON.

"Bells' ding dong, and choral song,
Deter the bee from industry;
But hoot of owl, and 'wolf's long howl',
Incite to moil and steady toil."

Northern Michigan, the home of the huckleberry and the speckled trout, where the wild deer drinks deep from little sparkling lakes with white pebbly beaches, where forests of magnificent beech and maple stretch away for miles unbroken, where still lingers some of Nature's wildness, here is proven the truthfulness of our opening adage—here is a veritable paradise for the bee-keeper. From Canada to California have we sought for the Eldorado, only to find, as is often the case, that it lies at our very door.

Four years ago I attended, at Traverse City, a meeting of the Michigan State Bee-Keepers' Association, and two things struck me quite forcibly: The uniformly good yields reported, and the wonderful interest shown in discussing the problem of how to have populous colonies early in the season, that the best advantage might be taken of the red raspberry bloom.

THE WONDERFUL AND UNIFORM YIELDS OF NORTHERN MICHIGAN.

The next year I attended another meeting of bee-keepers held in that part of the State, only further north, at Bellaire, Antrim County, and again I was surprised at the uniformly good yields reported, and upon inquiry as to the source, the reply was almost invariably "raspberries". Occasionally some one would add milkweed, or basswood, or willow-herb. I believe I quizzed the members of that convention more persistently than I ever did those of any other convention. If a man that I had cornered got away, I immediately corralled another. The man who occupied the room with me at the hotel, where we stopped, was snoring when I asked my last question. Then I went home with Mr. S. D. Chapman, and stayed a day or two, looked over the ground from which his honey was gathered, and listened to the ups and downs of his apicultural life. Red raspberries and bees have certainly pulled his feet out of the slough of debt. I became thoroughly satisfied that this region was the best place I had yet seen for the production of honey; but I wanted to see it with my own eyes when the harvest was in full swing, so, July, 1903, with camera and pencil, I started in at Traverse City, and spent nearly two weeks visiting bee-keepers from there along up north until near Charlevoix.

A BIT OF WILDNESS.

I did take one little side-trip to which I would like to devote a few words. The grand forests of white pine with which so much of this State was once clothed are now nearly extinct, and when I heard there was still a small tract in Otsego County, I thought "Here is an opportunity to get photographs of something that in a few years will be difficult to find—forests of pine in their native wildness, lifting their beautiful, plume-like tops 150 feet towards the heavens". After leaving the cars I walked five miles along a logging road, lugging my big camera with me, ate with "the hands" at their shanty (and it was pretty good fare, too), slept with the "boss" in his bunk, and the next morning started through the woods for a small lake, about two miles away, along the banks of which the men told me I would find the finest growth of pine. It had rained during the night, and my trousers and shoes were wet through long before I reached the lake—but an enthusiast does not stop for such trifles as that. I loosed the boat fastened to a stake, and floated out over the clear water—so clear that I could see the bottom at a depth that made me feel uncomfortable to think that I was over such deep water. On all sides towered the massive walls of dark green pines. The morning sun was driving away the wreaths of white mist that still lingered in their tops. Beautiful water-lilies, white and yellow, in all their purity and freshness, floated in great profusion on the surface of the water. As I rounded a little point, a red deer, standing knee-deep in water, eating lily-pads, gave one frightened look,

MILKWEED IN FULL BLOOM.

This picture shows the blossoms about one-fourth natural size. The leaves are a deep, glossy green, while the blossoms are a lilac purple, shading off into a magenta red. Later in the season each bunch of blossoms is replaced by a seed-pod nearly as large as a banana, and, attached to the seeds when ripe is some of the softest, silkiest, fluffiest, whitest, downiest substance that ever grew. Besides furnishing an abundance of honey, the blossoms also secrete a sort of gluey substance that sometimes catches a bee by the leg—usually the bee pulls away.

PATCH OF MILKWEED BY THE ROADSIDE.

In some parts of Northern Michigan milkweed furnishes an abundance of pasturage. In 1902, Mr. Ira D. Bartlett secured 75 pounds per colony from milkweed alone. The plant grows freely by the roadside, in openings, and really becomes a weed in crops that can not be cultivated—oats, for instance. It is about as difficult to eradicate as a Canada thistle. The honey is of good body, light in color, and has a flavor similar to the odor from the blossom—something like vanilla.

three magnificent bounds, and disappeared in the pines. Over all was a stillness that could almost be felt. It seemed as though I had never been nearer Nature's heart. The peace, the joy, the *reverence*, that came over my soul, is beyond my power to express.

SOIL AND CROPS—GINSENG CULTURE.

But, to return: A large portion of Northern Michigan, that portion I am describing, from Traverse City north to Petoskey, is hard-timber land—the grandest beeches and maples that I have ever seen—and the greater portion of the land is still uncleared. The best of the timber is being cut for lumber, then the small and crooked trees are cut up into furnace-wood. Some two years ago, or thereabouts, Mr. Chapman's son bought a tract of wild land just across the road from his father's, paying $4.00 an acre for it The timber, fit for lumber, had been cut. Last winter he was cutting up what was left into furnace-wood. After paying for the cutting and hauling the timber was netting him $16 an acre. Such land is now worth about $10 an acre. The soil is a sandy loam, which, aided by the cool, moist climate, produces the finest potatoes in the world. No other portion of the country is better adapted to the production of winter apples; and, while I am about it, I may as well describe a somewhat novel industry that flourishes here—the raising of ginseng for market.

Originally the plant grew wild, in great abundance, in these north woods, but men made a business of hunting for and digging it for the market (sometimes making $3.00 or $4.00 a day), until it is now very seldom that a plant is found in the woods, but I visited several gardens where it was under cultivation. The plants to start these gardens were dug up in the woods and set out. The natural home of the ginseng is in the deep woods, and in order that it may flourish under cultivation, the same conditions must be supplied. Leaf-mold is brought from the woods for use in making beds, and a shade is furnished by an immense frame-work 6 or 7 feet above the ground, upheld by stout posts, and covered with laths nailed on about an inch apart. The sides of the enclosure are also covered similarly with laths. In short, one way of describing the shade would be to say that a huge box was made of laths placed about an inch apart, and then turned upside down over the garden. The plants are set in rows about a foot apart, in beds 5 feet wide and about 100 feet long, and the dark, rich green of the leaves, growing in that semi-darkness, like that of a deep woods, is something delightful to behold. The dried roots are worth about $7.00 or $8 00 a pound, while the seeds are sold at such a fabulous price that I would rather not mention it. I was shown one bed of old plants, bearing aloft their bright-green seed-pods (and turn to scarlet when ripe), and told that if those roots should be dug and marketed, after the seeds had ripened, that the seeds and roots would bring $500! Just think of it, a piece of earth 5 feet wide and 100 feet long, bearing a crop worth $500!

The market for ginseng is in China, where it is regarded with a sort of superstitious reverence—supposed to possess unusual curative virtues; in short, a cure-all and a charm combined. Ginseng is a perennial of slow growth; the root continuing to increase in size for several years. Making a fortune raising ginseng is rather slow at the start (it takes a year and a half for the

HOME-APIARY OF S. D. CHAPMAN, OF ANTRIM CO., MICH.

Mr. Chapman winters his bees in the cellar, and this view was taken in March soon after they were put out. There were still patches of snow in the edges of the woods. Years ago Mr. Chapman had fine crops of honey from basswood. When this was lumbered off, there was scarcely anything left to produce honey, as the country was nearly all forest, and he seriously contemplated abandoning bee-culture. Finally lumbermen began cutting off the hard timber, and this left the land so nearly unoccupied that red raspberries sprang up and changed the location to one of the best for bee-keeping. From 150 colonies in 1902, Mr. Chapman secured $1000 worth of raspberry honey. In 1903, from 190 colonies, in two apiaries, he secured 23,000 pounds of extracted honey.

APIARY OF JAS. MARTIN, OF KALKASKA CO., MICH.

This apiary, of about 100 colonies, was built up in two years from 12 colonies, and a little over 4000 pounds of extracted honey taken. The enthusiasm of a beginner, together with raspberry bloom, did it.

seeds to germinate), but, if one has the patience to wait, it is very profitable in the end. Mr. Chapman told me that he sometimes wished that he had "gone into it" years ago when he began bee-keeping, but doubted if he should bother with it now. One man near Mr. Chapman's started two years ago, and now has gardens worth $5000, but he advertised and posted notices all over the country offering good prices for roots, and probably paid out a good share of his $5000 for stock.

THE RED RASPBERRY AND ITS HONEY.

But I must stop wandering and get down to business. I must take up the feature in which bee-keepers are specially interested. When this hard timber is cut off the wild red raspberries spring up and occupy the ground, and furnish the most reliable bee-pasturage there is to be found. The luxuriance of the growth is something wonderful. Many times, in riding along a woods-road, have I been able to reach out and pick the luscious ripe berries as we passed—the bushes being so tall and bending with fruit. I supposed that the wild red raspberry blossomed only a week or two, and then was done, but such is not the case. It keeps in bloom fully as long as white clover. It begins the last of May or the first of June, and when I was there, the latter part of July, the bees were still working upon it. If there is a drouth in August, and there are rains and warm weather in September, it sometimes blossoms again, and furnishes a second crop of honey. One bee-keeper told me that his daughter visited him the Fourth of July, and they went out and picked enough berries to have a shortcake; in September she came again, and they repeated the operation. While the honey is not quite so white as that from clover, it is still classed as a light honey, and has a delicious raspberry flavor.

The time will probably eventually come when this country will all be cleared up and cultivated, as is the case now in the older portions of the State, but that will be many long years hence. For 20 or 25 years it is likely that this portion of the State will improve as a bee-keeping country—more of the timber will be cut off; and the acreage of raspberry increased. In some localities of this part of the State there is still some basswood, but it certainly will not remain there many years. The same may be said of the willow-herb, or Epilobium. In some places milkweed furnishes a good crop of fine honey. Clover is already beginning to creep over the cleared fields.

Perhaps the bee-keepers already here will not thank me for thus exploiting their territory; they certainly would not have done so a few years ago, but bee-keepers are learning that it does not pay to crowd. Selfish motives alone prevent this. In a new country settlers are always welcome, and I doubt if there is a bee-keeper in this region who would not welcome other bee-keepers, and help them to find good locations, provided they came in the right spirit—willingness to go back a little farther rather than crowd some bee-keeper already located. How I should delight going into that region, buying 40 acres of land in some romantic location, clearing it up and planting it all to winter apples, and at the same time establishing a series of out-apiaries. If I were not located just as I am I certainly should do it....... But if I were a young man just beginning in bee-keeping, or a middle-aged man, for that matter, and trying to make a living keeping bees in a poor locality, I should certainly go to Northern Michigan. I would not do it rashly. I would not sell a good home, pack up my things, and drop down almost anywhere—I should spend a year or two in investigation, and learn from personal observation, long continued, the best place to go.

In this region bees are wintered both indoors and out, but the most successful wintering that I came across was that of the bees belonging to Ira D. Bartlett, of Charlevoix County. Although Mr. Bartlett is a young man, and unmarried, he has made a wonderful success of bee-keeping. For one thing, he is very particular. The hives must all stand exactly *so*, and the covers be put on square, and so on with everything. Perhaps these things in themselves do not bring success, but the trait of character that demands them is quite likely to command success. He has a bed, stove and dishes in the house near his apiary, and he literally lives with his bees during the working season, cooking his own

APIARY AND HOME OF GEO. H. KIRKPATRICK, OF KALKASKA CO., MICH.

A few years ago Mr. Kirkpatrick was making a scant living keeping bees in Indiana. A visit to Northern Michigan showed him its possibilities, and he was not slow in making the most of them. He now has a farm and the beautiful home and apiary shown above. In 1903 his 138 colonies increased to 206 and stored about 13,000 pounds of extracted surplus honey.

APIARY OF IRA D. BARTLETT, OF CHARLEVOIX CO , MICH.

Mr. Bartlett began with a single colony when he was 14 years old, has steadily increased, with no winter losses, until the spring of 1902 he was old enough to vote, and owner of an even 100 colonies, which he the next year increased to 150, and secured 4000 pounds of comb honey, besides extracting 7000 pounds. He dresses in white duck from head to toe, and believes that the use of this light-colored clothing saves him many stings and much annoyance from the bees. A train of cars was passing when this picture was being taken.

meals. His father lives in town, a mile and a half away, and when it comes time to pack the bees for winter they are hauled home and packed in the boxes that stand in his father's back yard. In the spring they are unpacked and hauled out to the apiary. The reason he gives is that he wants them under his eye all the time, and where they will not be molested by prowling marauders. Mr. Bartlett's onward and upward career as a bee-keeper is one that I shall watch with pleasure.—Bee-Keepers' Review.

Our Sister Bee-Keepers

Conducted by
Emma M. Wilson, Marengo, Ill.

Late Fall Warm Days—Apple Honey.

Dear Miss Wilson:—Referring to yours, "I never knew before that there are localities where there are no warm days after buckwheat frost" (page 88), I will explain more fully.

Our sun has considerable power well into October, and we have many beautiful days some years, that would be quite summery but for the icy breath—our foretaste of winter—that sweeps down from the Adirondacks or across the Lake from the Green Mountains to us. These winds are bracing tonics for worn-out nerves; but prevent any work in the hives being practicable after the supers are removed, for we leave them on as long as there is a chance for an extra hundred pounds, or until after the frost that usually occurs at the full of our September moon.

Our seasons are about a month shorter at each end than they are in Orange, N. J. Vegetation starts from 4 to 6 weeks later, but it hustles! In September we have the Jersey's October. Our October is their November.

I promised to tell you of a strange experience in our bee-yard last fall. Here it is:

We extracted just prior to the untimely frost of Sept. 10, after which we had several warm, beautiful days. As the bees were quite active I left the supers on for a week or two, thinking they might be working on a patch of flora that had escaped the frost. When the weather changed and the supers were removed, I found in them over 400 pounds of a delicious-flavored honey, utterly unlike any ever before gathered at Clovernook.

Our apiary is in our apple orchard. We had a very heavy yield this year, and twice each day the windfalls were collected and fed to our ducks. They ate three bushels a day. The honey had a very decided flavor of apples, and I concluded the bees got their nectar from those left in the grass or that rolled under their stands; but still I could not account for the 400 pounds as returns from the few apples that we had missed. I silently puzzled over the matter quite a bit.

Early in November, when I was fill-

WILD RED RASPBERRY IN ALL ITS GLORY.

The timber has been lumbered off, or cut for furnace wood, and the raspberries have completely occupied the ground. This view was taken in Kalkaska Co., Mich., and there are thousands of acres in that and adjoining counties where similar growths of berries each year "waste their sweetness on the desert air"—there are no bees there to gather the nectar.

ing an apple order for a A No. 1 fruit, I could scarcely find a perfect Tolman Sweet. They were covered with little punctures—small, black specks. These trees are in the bee-yard. None of our other varieties showed these spots. I remembered noticing bees crawling over apples and tap, tapping on the skin with their tails, and when I saw these spots it seemed as if they might have punched the holes with their stingers, and then turned around and licked up the nectar.

A friendly bee-keeper in Saratoga, to whom I confided my suspicions, wrote me that she had a similar experience in her orchard, only more so. Her fruit was badly punctured, and the bees were so thick on her windfalls that they drove her away when she tried to gather the fruit.

Our Farmers' Institute sent us last week, among other speakers, Prof. Stewart, of the Geneva Station, whose specialty is the diseases of fruit, especially apples and trees. I privately told him my tale, and gave him two sample apples, which he took away, and after careful testing will report to me results, which he expects will simply show whether the defects in the apples are due to disease or the sting of an insect.

Usually, you know, when the apples are growing mellow, the buckwheat bloom is at its best, and after the frost the bees take only short flights at about noon. At that time in the fall we gather our apples. This is the first fall, in my 10 years' experience here, that we have had so early a frost followed by such beautiful weather, and if my surmises are correct, this may account for the experience.

I will send you Prof. Stewart's report as soon as it is received.

(Miss) Frances E. Wheeler.
Clinton Co., N. Y.

That report of Prof. Stewart will be awaited with much interest. But, surely, the finding will not be that the bees had any hand (or sting) in puncturing the fruit. At one time Rev. W. F. Clarke gravely asserted that bees used their stings as trowels with which to work the wax in building their combs, but no particle of proof was ever given for such statement, and no one takes it seriously nowadays. It is extremely doubtful that the bee ever uses its jaws to puncture fruit, and still more doubtful that it uses its sting for that purpose.

It is true that bees do make a sort of tapping with their tails that you have been observant enough to notice; but when you saw them doing so did you ever see one thrust out its sting? It ought easily to be seen, if the sting is thus thrust out. Did any one, in any case, ever know a bee to thrust out its sting while in the act of searching or taking a lunch? It might be suggested, also, that if a bee should sting an apple and then turn around to lick up the escaping juices, the act of turning around could be plainly seen. Please note next fall whether such turning around really occurs.

It may be interesting to some of the sisters to know that Miss Wheeler is a member of the faculty of the Columbia School of Poultry Culture in New York State. She makes a specialty of rearing high-grade Pekin ducks, most of which she sells at good prices as breeding stock. She also devotes a considerable portion of her time to bees, having found the combination of bee-keeping and poultry culture both profitable and pleasant.

Proceedings of Conventions

ONTARIO BEE-KEEPERS' CONVENTION.

REPORTED BY MORLEY PETTIT.

(Continued from page 152.)

Mr. R. F. Holtermann read a paper on

THE PAST WINTER'S LOSSES AND THE DEDUCTIONS TO BE DRAWN THEREFROM.

In the Canadian Bee Journal for September appears a letter from the veteran statistician in the Department of Agriculture for the Dominion, Mr. George Johnston, which reads in part as follows:

"We certainly had a severe loss in our bees here. I lost all I had in Nova Scotia. East of the Ottawa I think more than 75 per cent of the colonies were lost. That would mean 53,000 or 54,000 colonies dead, leaving not more than 17,000 that came through the winter, while 50 per cent loss west of the Ottawa would leave the stock of bees not more than 60,000, giving in all 77,000 where the census of 1901 gave a total of 190,000. This is a terrible death-rate, and at $2.00 a colony the loss through the winter's action would not be far from a quarter of a million dollars for bees alone, to say nothing of the loss of honey through not having the bees. If the whole 77,000 give off two swarms this season, we would still be 69,000 to 70,000 colonies short of what we were in 1900."

The above statement, coming from such a source, has upon it the stamp of authority. I had previously placed the percentage of loss at 70, which in my estimation is not too high.

In estimating the financial loss, we must remember that a great many of the combs and hives in which the bees perished have become useless, the combs having been destroyed by that enemy (and friend) of the bee-keeper—the moth. The hives sometimes find a market at a loss, but quite often the moth renders them partially valueless, carelessness and time completing the work of destruction. Three or four dollars per colony would be a very conservative estimate of the loss in bees and hives. Again, the majority of the colonies that survived were in too weak a condition to take proper advantage of the honey-flow when it came, resulting in the loss, through lack of workers, of a large percentage of nectar which might have been harvested.

Looking at it from a national standpoint, there would be a financial loss to the country of at least half a million dollars, and a blow to the industry from which it will take years to recover. So much for the fact. Next in my address I am called upon to make deductions.

Webster's Dictionary gives as the meaning of deduction, "That which is deducted or drawn from premises by a process of reasoning; an inference; a conclusion." Let me confess that this is a line of work I like, however feeble my powers may be to perform. Looking at bee-keeping as a whole, I see in many of the articles which are written for bee and agricultural papers in general, in the items in the general press, even in the addresses at conventions, and in the discussions which take place, a great many statements as to what the exponent does, or informing others what they should do, but painfully little as to how he should act under given conditions, and showing why it should be done in that way. There are laws in Physics, in Chemistry, in Nature, which can be explained and made intelligible to even a simple-minded individual. Without the above, in connection with instruction, there can be no intelligent action and no solid, intelligent progress.

Conditions studied are of prime importance, and the foundation of successful action, and such a course would lead to greater harmony in our discussions, greater intelligence and greater progress in the bee-keeping industry, and vastly benefit us individually and collectively.

To learn to think truly, and not merely imitate or ape would not only lessen the per cent of winter loss, but would revolutionize many of our lives for time, yes, for eternity.

May we from last winter's experience come to the conclusion that Canada is not suited to this, the æsthetic branch of agriculture, or may we even say that it is not a safe branch of agriculture in Canada? Far be the thought from us. As to quality, wherever shown, the quality of Canadian honey has proved itself to be unsurpassed. Judges—not Canadian, even foreigners—have again and again pronounced in favor of our honey. British experts, honest men, who had a love for and a fostering interest in the development of bee-keeping in their own land, have told me and others that our Canadian honey leaves nothing to be desired.

As far as the winter is concerned, we have among us those who winter bees with as great certainty and success as the shepherd and the herdsman winter his flocks and herds. In this respect what one can do another may. Shall we then say that the past winter was a winter in which bees could not be wintered with success? We must admit it was the most disastrous for many years. To my recollection we have had none like it for 23 years, but both in repositories and outside bees were, during the time under discussion, wintered with success. Such a line of argument must then fall to the ground.

Shall we then say that a great many do not know the conditions under which bees can be wintered with reasonable safety? If we can judge from what we see and hear, we may surely make this assertion with safety. There are many who do not know, who can not know, the conditions under which bees can with reasonable safety be wintered. They have begun bee-keeping through the acquisition of a stray swarm, or the microbe of bee-fever has taken root in their mind through the success of one who has devoted his time to the work. They see the returns, but not the labor. No literature upon the subject is sought; they have no proverbial "long-felt want," or short either, for knowledge. An old hive is bought, perhaps with foul-brood germs; this neglected hive may be a breeding-place for this disease, and the moth. During their short career as bee-keepers, if product they have, it is oftener than not, taken in such a shape that when sold it depresses the market. They sell at a sacrifice. This class of bee-keepers is a menace to apicultural society, and cannot be too strongly discouraged. With the beginner who sees in it a business and desires to engage in it in a business-like way, we as individuals and especially as an association having a Government grant, entrusted with public money, should have every sympathy.

Let us state the truth, that bee-keeping is an occupation full of problems, which multiply to our view as we gain experience and rise in it.

The occupation we know nothing of is the one which appears simple and easy to understand. Let us take home the wholesome lesson in spiritual as well as temporal life, imparted when man fell, "In the sweat of thy face shalt thou eat bread"; to produce good, evils must be resisted and difficulties overcome. We can easily recognize this class who do not know the conditions under which bees can be wintered with reasonable safety. There is, however, under this head another class, perhaps not as numerous, but more dangerous, who can do an immeasurable amount of harm in influencing the less experienced and less thoughtful bee-keeper. I refer to the blind leaders of the blind. It is a well-known joke among the veterans that when a bee-keeper has a little experience he knows more than he ever will again; he can tell you all about it; this he realizes he never can at a later stage of the game.

I am fairly familiar with the various branches of agriculture, having been brought up on a farm, worked on a farm, taken a course at the Ontario Agricultural College, and kept in touch with the developments of modern agriculture since. Seeing from that standpoint, it seems to me that no class of agriculture is handicapped as bee-keeping is with such inefficient instructors and experimenters in one way and another. Anything and anyone is good enough to take the bee-department, when in other lines it would not be offered or tolerated. These agencies, be they Government or private, by their action endorse the thought that it requires no training to keep bees, and these agencies help to swell the ranks of those who increase the percentage of winter loss, and who are a menace and a detriment to the agriculture of a country.

Our world's governments, if we except some countries in Europe, our public institutions, our press, in the development of our various branches of agriculture, remind me largely of the unjust father who had a large family to provide for, and found it impossible to give to every child a first-class education and position, so he sent some to school, college and university; they became noted men; others, however, instead of educating them at school and university, he set at breaking stones on the road; the children became marked contrasts; the former in time looked down with scorn upon the latter; the stone-breaker as the eminent man's carriage drove by, justly despised and perhaps envied his rich brother because he had been elevated by having given to him what was justly the stone-breaker's share, and the head of the family was judged for his partial action, and condemned by every just and thoughtful person. Some branches of agriculture are rolling by in their carriages, whilst apiculture and apicultural markets are still in the stone-breaking stage.

Then we see those who know how to prepare their bees, but are too busy, too careless, and too indifferent to put that knowledge into practice. We know of many who undertake too much, who have too many irons in the fire; the return they get for the capital they have invested is a loss, a reputation for lack of thoroughness, to say nothing of added worry and annoyance. The person who is constitutionally a little behind should never keep bees. The "too many irons in the fire" man never reaches the degree of success where that success gives him a stimulus and pleasure of which the ordinary man knows nothing. We are in the days of the specialist; no man is competent to lead in a variety of agricultural subjects.

My last deduction is that last winter's experience, and years of experience, teach us that bee-keeping is a branch of agriculture which punishes sooner or later the careless, inexperienced bee-keeper, and the person who cannot give it due attention. And it rewards liberally the careful, energetic, thrifty and studious performer; in other words, it is worthy the attention of our brightest minds and dispositions. This last deduction is sound, and the more we blazon abroad this fact, the better for bee-keeping, and the better for the country. The more successful bee-keepers' will we have, the less of the dangerous elements. Bee-keeping is an occupation peculiarly dangerous to one of a slothful or improvident disposition. Action has to be taken when present circumstances would not spur us to that action. To prepare for a honey-flow weeks, yes, months, before, when cold would rather draw us to the fireside; to prepare for a rush of honey when scarcely a bee is stirring in the apiary, requires energy and foresight. The life history of the bee, a knowledge of the best implements, mechanical training, botany, chemistry, entomology, physics, and meteorology, the nature of soils, physical strength, mental endowments and business acumen possessed and applied, all will be rewarded when one engages in bee-keeping. This is more or less true of all branches of agriculture.

In choosing a life profession the parent and child often choose a calling where the means financial, mental and otherwise, can give no hope of being in anything but the vanguard of the profession. Desire in this should be governed by solid sense. The careless and thoughtless, and the poorly-equipped and shiftless, better not follow agriculture as a business, and select something which does not require so wide a range of information and powers. It would be better for him to become a lawyer, a doctor, a merchant, a politician, or the like.

Strictly speaking, my subject ends here, and yet I venture an addition to what has been said, to say a few words upon the additional prevention of these winter losses. Seeing that every colony has a fertile queen, of the best wintering strain, and 30 pounds of winter stores, would reduce the percentage of winter loss very much. The colder it is the more compactly bees cluster. If stores do not reach the cluster they may not be able to break the cluster to reach the stores, and starve. This is frequently the case during prolonged cold-spells, and only a moderate amount of stores in the hive.

The moisture given off by the bees should be expelled from the hive. After allowing in outside wintering sufficient packing to protect from cold, there are two methods advocated. By means of one, the fresh air is brought in at the entrance of the hive, and the air laden with moisture and carbonic-acid gas carried off at the same opening.

The other method is to bring in the pure air at the entrance and carry the foul air by the pressure from the fresh air entering the hive, and the natural tendency for the warmed air to rise, by these means to carry the exhausted air through the packing above.

Arthur C. Miller, in the Review, lays down in no uncertain tones that the entrance is the proper opening for fresh air, and also the outlet for foul. In a stove we have the place where the fresh air enters, as in the hive we have the entrance to the hive. In the wood and fire we have combustion and oxidation, as with the bees and honey we have combustion and oxidation. When the fresh air entrance becomes the natural outlet for the smoke and carbonic-acid gas, then the entrance to the hive will be the natural outlet for the exhausted air of the hive.

In the common entrance and outlet we have what is known in science as a friction of air currents, the bees wasting energy in expelling it, as they do in forcing the warmed atmosphere down. Another objection is that more or less of the exhausted, impure air, must be drawn back into the hive by what is known as diffusion of gasses. But what makes this advice so dangerous in colder climates—and I have no doubt that this advice has led to the loss of many a colony of bees during the past winter—is that as the moisture-laden air returns to the colder part of the hive, it condenses and freezes, the distance inside of the hive the moisture condenses depending upon the cluster, the size of the hive, the size of the entrance, and the efficiency of the packing. Such conditions were common, and the cold and damp atmosphere with the frozen entrance destroyed the bees. Let me say that cold alone rarely kills bees. I saw in Norfolk during the latter part of March bees alive and apparently in fair condition that had been standing out all winter in hives, with upper stories, and a ⅞-inch hive-cover, the combs and the bees in the lower chamber of the hive did not even have a thin cloth above them, the nearest protection was the warped ⅞-board at the top of the upper story. Cold was there surely in abundance, but no moisture lingered in the atmosphere about the bees.

The right method is the chimney principle—the foul air carried away at the top, packing enough to keep the bees warm, but not so abundant or so compact that the foul air could not rise through the packing on the hive. Here where the moisture leaves the hive the hive is warm, the heat of the cluster and the air rising and no condensation takes place until the moisture reaches the top of the packing, or until it strikes the under side of the outside case-cover. Here it can be disposed of at favorable periods by allowing moderate ventilation under this cover. The common opening ventilator is wrong in principle in any climate, but particularly injurious and dangerous in a cold climate. I trust I have made this clear.

In inside wintering there have been heavy losses, chiefly in respositories which could not maintain an even and sufficiently high temperature. The moisture above-mentioned has also not been carried off. This combination with low temperature resulted in heavy losses.

Our own repository, which will hold 1,000 colonies, and has this winter 700 in it, is especially built with the object of securing a uniform but sufficiently high temperature. The fresh and the foul air is not brought in at the same entrance, but for convenience and economy of space the back of the hive is raised two inches on the stand and ⅜ inches from the bottom-board. Through this rear-opening the foul air escapes.

In conclusion, let me say, not alone will these periodic attacks occur to bee-keeping, but the cheapest production and the best goods will not be secured, neither will we have our markets developed to their best until we secure that recognition for bee-keeping and that aid in the development of the industry which has been given to other branches of agriculture. We may bluster, we may make statements that bee-keeping does not require such aid, but it cannot be shown by a line of logic that in this respect the principles which govern its development are different from other branches of agriculture. Dairying would not go back to the days before it had no fostering care. Fruit-growers value the help they are getting; the poultry industry has been put upon a more profitable footing; and so might bee-keeping have a new era of prosperity under proper guidance.

R. F. HOLTERMANN.

J. K. Darling—Much loss of bees was caused by the dearth of honey last season. The bees quit breeding too early, and did not have enough honey for winter.

J. B. Hall—They started breeding too early and exhausted themselves. Old age comes not from the number of months bees have lived, but from the number of babies they have reared.

Mr. Holtermann—Top ventilation is not so necessary in the cellar as out-of-doors. It is not a question of bringing the bees out alive. They must be in good condition for best results.

Mr. Sibbald—They must have heat to expel the moisture at the entrance.

D. W. Heise—The loss was caused by the continued low temperature. I had wintered successfully with no packing on the sides and bottom—only on top, but that was not sufficient for the last winter.

Mr. Chadwick piles his bees five high in the cellar; has ventilation all at the entrance; and very little air is admitted to the cellar. He sets his bees out on April 27.

Morley Pettit considered the cover might well be tight when the hive is pried up ⅜-inch from the bottom-board at the back. Of course some upward ventilation through a chaff cushion is good. The point to be observed is, warm covering for hives in the cellar to raise the hive temperature above that of the cellar air. This facilitates change of air in the hive.

RESULTS OF APIARIAN EXPERIMENTS AT THE CENTRAL EXPERIMENT FARM—CELLAR WINTERING OF BEES—DESCRIPTION OF CELLAR AND GENERAL ARRANGEMENT OF HIVES.

The cellar is below a private house. The walls are of stone and the floor of cement. The bee-room, 11 feet 6 inches wide by 15 feet long and 7 feet high, allows three tiers of shelves and two passages. It is boarded off from the remainder of the cellar by a partition which extends all around the chamber, and far enough from the stone wall to allow of an air-space. Should there be enough bees to fill the cellar the boarding could be left out. Under the cement floor a layer of one foot of stones varying in size acts as a drain and keeps the cellar perfectly dry. The lowest shelf is 18 inches from the floor, the second 20 inches in the clear above, and the third 20 inches above that. Neither the hives on the third or uppermost shelf nor the uprights supporting the shelves touch the ceiling, so that no vibration can reach the hives from above. This chamber is thoroughly ventilated, as is also the whole cellar. Before entering the bee-room is a smaller compartment with a door leading outside and another leading to the bee-room. Both rooms have sliding ventilators in the doors, so that outside air may be let in at will. Ventilation is carefully attended to and sudden changes of temperature are avoided; for this, a thermometer which is always kept in the cellar, is watched. The best temperature for the bee-cellar has been found to be from 42 to 48 degrees Fahrenheit. This arrangement has given entire satisfaction. In former years there was not proper ventilation, and the cellar was always damp. Since the concrete floor has been laid and the ventilators put in, the cellar has been much drier and cleaner. It is also rat and mouse-proof, which is a very great advantage.

Experiment No. 1.—Six colonies were put into winter quarters in the cellar and placed on the shelves. Under the back end of each hive was placed a 2-inch block, each hive was besides raised from its own bottom-board by a one-inch block being placed at the back so as to insure free ventilation. All front entrances were left wide open, the wooden covers were all removed, and replaced with cushions made of chaff 4 inches thick, sufficiently wide and long to lap over the hive 2 inches. Temperatures were taken once each week all through the winter and were kept very even, from 44 to 48 degrees. The bees were quiet, only a very slight hum being noticeable up to February, when, the temperature having risen to 48, the bees began to get uneasy and made considerable hum. Cold air was carefully let in during the night by opening the slides in the doors and closing them in the morning; this of course lowered the temperature and the bees quieted down. During the past winter [1903-'04] every colony in this experiment was perfectly dry and clean, and all came out in excellent condition. Average weight of each hive when put into winter quarters, 58½ pounds; when taken out on April 22, 49¼ pounds per hive; showing that each hive had lost 9¼ pounds on an average.

Experiment No. 2.—Six colonies were put into the cellar and placed on the shelves, a 3-inch block being placed between the bottom-board and the brood-chamber only in front, making the full entrance 3 inches high across the whole front. The wooden covers were removed and replaced with a chaff cushion. Temperature same as in Experiment No. 1. During the whole winter all the colonies in this experiment were perfectly dry and clean, and showed no uneasiness of any kind. The bees could be seen hanging in a quiet cluster below the frames any time during the winter. The average weight when put into winter quarters on Nov. 23 was 59 pounds and 12 ounces; when taken out April 22, 51 pounds and 8 ounces; showing that each hive had lost on an average 8 pounds and 4 ounces.

Experiment No. 3.—Six colonies were put into the cellar and placed on the shelves, with tops and bottom-boards of the hives left on, just as they were brought in from the bee-yard. They were watched for dampness, mold, or dysentery, also to compare the amount of honey consumed. Temperature of cellar the same as in Experiment No. 1. During December and January all were very quiet. During February there was considerable humming. Drops of water were noticed along the entrances of three hives. There were but very few dead bees on the bottom-board and no sign of dysentery. On examination when put on the summer stands, two of the hives had considerable molded combs. The average weight when put into winter quarters, 58 pounds and 10 ounces; when taken out April 22, 49 pounds and 3 ounces; showing that the average loss of each hive was 9 pounds and 7 ounces.

Experiment No. 4.—Six colonies were put into the cellar and placed on the shelves, with bottoms of the hives left on, just as they were brought in from the bee-yard. The wooden covers were removed and nothing left on except a tightly-sealed propolis quilt; the natural entrance was left wide open. Temperature of cellar same as in Experiment No. 1. During the entire winter the bees kept perfectly dry, and a very slight hum could be heard. There were but very few dead bees on the bottom-board and no sign of dysentery. On examination when put on the summer stands all the colonies were found to be in first-class condition. The average weight when put into winter quarters Nov. 23 was 59 pounds and ounces; when taken out April 22, 49 pounds and 3 ounces; showing that on an average each had lost 8 pounds and 12 ounces.

DAMP CELLARS FOR WINTERING BEES.

Many letters are received enquiring whether a damp cellar is a fit place to winter bees in. An experiment was conducted during the winter of 1902-3 with three colonies of bees. During the winter of 1903-4 it was thought best to try this experiment with six colonies in a similar manner as in the previous experiment. Seven pails of water were arranged in such a way that the colonies of bees would rest on the edges of the pails, allowing the full surface of the water to be exposed.

Six colonies were selected for this experiment, all of about equal strength, and all in Langstroth hives, weighing on an average 57½ pounds each. The wooden covers were removed from the hives and replaced with propolis quilts; the bottom of each hive was loosened from the brood-chamber and a block 2 inches square was placed at each corner between the bottom-board and the brood-chamber, ensuring free ventilation from the bottom of each hive. The cellar was kept at a very even temperature of 44 to 48 degrees. The bees could be seen hanging below the frames in a quiet cluster all winter. They were all examined once each week and at no time did there appear to be any sign of uneasiness from the extra moisture. There were scarcely any dead bees on any of the bottom-boards nor any sign of dysentery, and all came out in excellent condition. The colonies were put on the summer stands on March 20; the day being fine and warm, all began flying at once. The average weight of the six colonies when put on the summer stands was 44¼ pounds each. During the days intervening from March 20 to April 5 the weather was cool and no flying took place up to the later date. At this period there was but one good, bright, warm day (April 5) and the bees had to content themselves to remain indoors until April 22, when the weather turned quite warm. The bees then built up very rapidly and were in excellent condition for the honey flow.

A second experiment was tried, adding more moisture. Six colonies were selected for this experiment, all of about equal strength, and all in Langstroth hives, weighing on an average 58¾ pounds each. The wooden covers were removed from the hives and the sealed propolis quilts left on, the bottom-board of each hive being loosened from the brood-chamber and a block 2 inches square placed at each corner between the bottom-board and the brood-chamber, ensuring free ventilation from the bottom of each hive. Seven pails of water were then put on the floor in such a way that the six hives were resting on the edges of the pails, allowing the full surface of the water to be exposed. In addition to the pails of water six inches of sand was spread on the cellar floor between the pails and covering six inches of the floor outside of the pails. There was also a large cotton sheet spread over the six hives. The sand and sheet were kept thoroughly saturated with water once each week during the winter. The cellar was kept at a very even temperature of 44 to 48 degrees and was well ventilated during the whole winter. The bees in this test were more uneasy than in the experiment first described where no sand or cotton covering was used, having to keep up fanning for ventilation. There were also considerably more dead bees on the bottom-boards and several had drops of water along the entrance, but there was no sign of dysentery. On March 20, the day being fine, the colonies were removed to the bee-yard, where all began flying at once. The average weight of the six colonies when put on the summer stands, was 44¼ pounds each. From March 20 to April 22 the bees had but one good flight. After April 22 the weather became considerably warmer, they began building up rapidly, and were in excellent condition for the clover bloom.

The average strength of the six colonies that had the extra moisture was not as great as in the former test, but as soon as they got fine weather they gained rapidly. Care was taken to see that the colonies in both tests had plenty of unsealed stores before fruit-bloom and between fruit and clover-bloom. This was done by uncapping one side of a frame of honey nearest to the cluster, allowing the bees to use up the honey for food and providing space for the queen to lay her eggs. Although so much moisture was in close proximity to the colonies, a great deal of the success of this experiment is no doubt due to the good cellar in which it was tried, the cellar having stone walls, cement floors, good ventilation and the temperature being easily regulated. This goes to show that good ventilation and even temperature have a great deal to do with successful wintering. An excellent plan for ventilating is to have sliding ventilators in the doors, so that much or little air may be let in as desired. Also connect an extra stove-pipe, provided with a damper to the regular heating stove. This may be done by means of a T or an extra flue will answer. Allow the pipe to extend into the cellar. This plan of ventilating has proven very successful.

EXPERIMENTS TO DETERMINE WHICH BEES WOULD CONSUME MOST, OF HONEY OR SUGAR, WHILE BEING CONFINED IN THEIR WINTER QUARTERS.

Eight colonies in Langstroth hives were selected for this experiment, all of as nearly equal strength as could be secured. On September 1 their natural stores were removed from both sets. On September 2 all were weighed as follows:

(*a*). The 4 colonies fed sugar syrup: No. 1 weighed 30 lbs. 7 ozs.; No. 2, 31 lbs. 12 ozs.; No. 3, 31 lbs. 10 ozs.; No. 4, 31 lbs. 3 ozs.; average of weight 31 lbs. 4 ozs.

(*b*.) The 4 colonies fed extracted honey; No. 1, weight 30 lbs. 9 ozs.; No. 2, 31 lbs. 10 ozs.; No. 3, 30 lbs. 12 ozs.; No. 4, 31 lbs. 1 oz.; or an average of 31 pounds.

Miller feeders were placed in empty section-supers, close to the top of the brood-frames, any part of the brood-frames not covered by the feeder being covered by a propolis quilt cut so as to allow the bees a passage through it. By keeping the feeder well packed around, except where the bees enter, the heat is kept in and at the same time the bees cannot daub themselves with the liquid. In both experiments the bees had a constant supply of syrup and honey. Both the honey and the syrup were supplied to the bees at about blood heat. The syrup was made of the best granulated sugar, two parts to one of water by weight. The water was first brought to a boil, then the boiler was set back on the stove and the sugar having been poured in, the mixture was stirred until all was dissolved.

The 4 colonies fed sugar syrup when put into winter quarters November 24 weighed as follows: No. 1, 61 lbs. 4 ozs.; No. 2, 62 lbs. 9 ozs.; No. 3, 62 lbs. 7 ozs.; No. 4, 62 lbs. 0 oz.; or an average of 62 lbs. 1 oz.

The 4 colonies fed extracted honey when put into winter quarters on November 24 weighed as follows: No. 1, 62 lbs. 13 ozs.; No. 2, 62 lbs. 14 ozs.; No. 3, 62 lbs.; No. 4, 62 lbs. 5 ozs.; or an average of 62 lbs. 8 ozs.

The 4 colonies fed sugar syrup when taken from their winter quarters March 22 weighed as follows: No. 1, 47 lbs. 3 ozs.; No. 2, 49 lbs. 4 ozs.; No. 3, 51 lbs. 5 ozs.; No. 4, 51 lbs. 8 ozs.; average, 49 lbs. 13 ozs.

The 4 colonies fed extracted honey when taken from their winter quarters March 22 weighed as follows: No. 1 50 lbs. 9 ozs.; No. 2, 53 lbs. 1 oz.; No. 3, 51 lbs. 13 ozs.; No. 4, 51 lbs. 2 ozs.; average, 51 lbs, 10 ozs.

Difference in favor of the honey, 1 lb. 13 ozs. per colony.

When put into winter quarters they were placed on the shelves in the cellar, and the wooden covers were raised at one end ½ an inch, while the sealed propolis quilt was left undisturbed. The hives were all given extra ventilation at the bottom by placing at the entrance a wooden block between the bottom-board and the brood-chamber, thus raising the front of the brood-chamber 3 inches extra. During the balance of November and December very slight humming could be heard; January and February scarcely any appreciable hum could be heard. During the whole winter there was no sign of uneasiness of any kind and very few dead bees about the entrance, the bottom-boards were quite clean and no sign of dysentery in either experiment. All came out in first-class condition and built up rapidly for the honey-flow.

INSULATING HIVES FOR OUTSIDE WINTERING.

Two colonies of equal strength with good laying queens in Langstroth hives were taken for this experiment. The hives were insulated against the winter cold by cushions in the following manner:

Slats 1 inch thick were nailed at intervals all around the hive; on these was tacked one layer of thick brown building-paper and then a layer of oiled paper, which increases durability and also keeps out vermin. In order to provide extra protection to the hive, a box six inches wider and six inches longer was placed over this with an opening cut at the entrance, 1 inch by 2 inches, all other openings being closed. The wooden covers of each hive were removed and replaced with a chaff cushion 3 inches thick, the latter placed on the propolis quilt, and lapping over the sides of the hive; two layers of paper were then placed on the top of the cushion and a second cushion added, with the top of the outside box over it.

The bees were put into winter quarters November 18. No sound could be heard from these colonies all winter, up to March 10, when a slight hum was perceptible. On March 20, the first bees made their appearance; there were many dead bees at the entrance of the hives. On March 21, the day being bright and warm, the outside cases were removed, leaving the paper and one chaff cushion on during the cold spring. Upon examination, one colony was found to be in fairly good condition; the other very poor, with many dead bees on the bottom-board. A few days afterwards the latter was found to be deserted. The frames in both cases were all dry and clean and had abundance of honey to carry them through from November to the clover bloom. Weight, when put into winter quarters, 53½ pounds each; in spring, 37¼ pounds each, or a loss of 16¼ lbs.

A second experiment was tried similar to the above. Four hives were taken for this test, instead of having them packed single. The four were placed in a large packing case, the case being one foot larger each way than the hives, the hives being placed six inches apart in the case, with six inches of cut straw on the bottom of the case for the hives to rest upon. The .6-inch space between the hives was packed with cut straw, also the one-foot space all around and on top of the hives. The entrance of two of the hives faced each that of the other, and two hives faced west. The entrance to the hives was kept clear of snow all winter to insure free ventilation. No sound could be heard from these colonies all winter.

On March 22 the bees made their appearance, when many were flying briskly going out and returning. From March 22 to April 22 the bees had but one good flight. On April 22 they were then examined. Very few dead bees were found on the bottom-boards; the combs were dry and clean and no sign of dysentery. They were then removed from the packing case and placed on the summer stands. The average weight of the hives when the bees were put into winter quarters was 62½ lbs.; when put on the summer stands, 49¼ lbs., showing that each hive had lost 13 pounds and 4 ounces. The weather at this date being bright and warm the bees built up rapidly and were in excellent condition for the honey flow.

This experiment was tried in a well-sheltered corner where no cold winds could get at the hives.

SAINFOIN.

This clover has again attracted much attention on the Central Experiment Farm, both as a fodder-plant and also as a honey-producer. Sainfain sown in May, 1903, came in bloom on Aug. 15, of the same year, was cut for hay on Aug. 28, and gave a yield per acre of one ton and 760 pounds of cured hay.

The autumn growth was allowed to remain as a cover for protection to the roots over winter. The summer of 1904 growth strong and even; height averaged 23 inch; came in bloom May 31, and lasted up to June 20, when the plot was cut for hay. These dates might have been extended had the plants been grown merely for honey; but as they were at that time in the best condition for hay they were cut for that purpose.

The yield of the first cutting was 2 tons 840 pounds of cured hay per acre. The seceond bloom was on July 30, and lasted until Aug. 15, when it was again cut for hay, giving one ton and 837 pounds of cured hay per acre, or a total yield for the year of 3 tons and 1,677 pounds per acre.

INTRODUCING QUEENS.

Eight queens were introduced during the season, four on the Benton plan and four with frames of brood taken from several hives. All queens belonging to the colonies that were to receive the imported queens were removed 24 hours before introducing the new queens.

Benton Introducing Cage Method.—The Benton mailing and introducing cage is ordinarily used over the country. This consists of an oblong block of wood with three holes bored nearly through, one of the end-holes being filled with "Good candy, and the other two being left for the occupancy of the bees and queen. On the back of the cover are printed the directions for introducing, and at each end of the cage is a small hole bored through horizontally, but which in the mails is stopped by a cork. One hole is for the admission of the bees and queen preparatory to mailing, and the other for the liberation of the queen, by the bees eating out the candy in the course of 20 to 30 hours, thus releasing her automatically. When the cage is received, the cork covering the candy is to be removed, as well as the wooden cover over the wire-cloth. The cage is then placed on top of the frames, care being taken to place the wire-cloth over the space between two frames in the center of the brood-nest. The queen is then released by the bees in the manner explained.

I would advise all to have extra cages for introducing so that no disease may be brought in with the queen. See that the cage you introduce with is thoroughly cleaned, and have fresh food in readiness made from your own honey placed in the cage. Then remove the queen and bees from the cage they were received into the one prepared for them and follow directions above.

How to Make Honey and Sugar Thick for Feeding.—Take good, thick honey and heat (not boil) it until becomes very thin, and then stir it into pulverized sugar. After stirring in all the sugar the honey will absorb, take it out of the utensil in which it is mixed, and thoroughly knead it with the hands. The kneading will make it more pliable, and soft, so that it will absorb or take up more sugar. For summer use it should be worked, mixing in a little more sugar until the dough is so stiff as not to work readily, and it should then be allowed to stand for a day or two; and if still so soft as to run, a little more suger should be kneaded in. A good deal will depend upon the season of the year—there should be more sugar in proportion to the honey in warm weather than in cool weather.

ANOTHER METHOD OF INTRODUCING QUEENS.

Select a strong colony, remove the wooden cover, and place a fine wire netting over the tops of the brood frames to prevent passage from one hive to the other; place on top of this wire-cloth a brood-chamber with 4 frames of well-sealed brood, selected from different hives, with young bees just hatching out, but with no unsealed brood. Put the queen in this and close the hive bee-tight, and keep it over the strong colony four or five days. By that time a respectable force of young workers will be present, and the hive may be placed on the stand where it is to remain and the entrance to be made large enough for only one bee to pass at a time. As a matter of precaution against robbing, the entrance may be opened as the colony gets stronger. This later plan has never failed with me.

JOHN FIXTER.

DIRECTOR'S REPORT.

The year just past has been a very peculiar one for the bee-keepers of this Province, and of the northern and eastern portion of the United States as well, in that there was an almost unprecedented loss among bees. This fact, coupled with the rather poor honey season, has resulted in a very small crop of honey. We have the satisfaction, however, to report that the quality of the crop secured has been up to the average.

The sum of $200 was set apart for the affiliated societies. This was expended in accordance with the by-laws. There was no money granted to the different agricultural societies during the year, but we have added $50 of the funds of the Association to the special grant from the Government for the prizes and other expenses of the Fruit, Flower and Honey Show. The Canadian Bee Journal has been sent to each member of the Association, as usual. As you will see by the reports of the different officers we are able to report that our finances are in a healthy condition, notwithstanding our extra expenses during the year.

THE DIRECTORS.

The election of officers resulted as follows: President,

H. G. Sibbald; First Vice-President, R. H. Smith; Second Vice-President, F. J. Miller; Secretary, W. Couse, of Streetsville; Treasurer, M. Emigh; Auditors, J. L. Byer and Jos. Thompson; Inspector of apiaries, Wm. McEvoy, of Woodburn; Assistant Inspector, F. A. Gemmill; Committee to revise report, H. G. Sibbald and Morley Pettit; Committee on transportation, H. G. Sibbald, R. F. Holtermann and Wm. Couse.

As the next place of meeting, Toronto was chosen.

Report of the Vermont Convention.

BY W. G. LARRABEE.

The 13th annual meeting of the Vermont Bee-Keepers' Association was held in Middlebury, Jan. 12, 1905.

The meeting was called to order at 10 a. m. by Pres. Cram. Reports of secretary and treasurer were read and adopted, and Pres. Cram appointed the following committees:

RESOLUTIONS—J. E. Crane, H. L. Leonard, and Mrs. C. M. Rice.

NOMINATIONS—V. V. Blackmer, G. C. Spencer, and P. E. Crane.

Then followed a discussion led by J. E. Crane on the benefits derived by bees fertilizing flowers of all kinds, which was participated in by others.

G. C. Spencer then gave a talk on how to produce honey free from travel-stain. He thought travel-stain was caused more by using old combs than any other way. Mr. Crane prevented travel-stain by using a honey-board with entrances to the supers only on the sides and ends of the hive.

W. G. Larrabee then spoke on the production of comb versus extracted honey, as did many others. This discussion brought out the fact that honey would not be poisoned by being stored in galvanized-iron tanks.

The question box was opened by V. V. Blackmer, and several questions asked and answered. One was, "Is it any advantage to give bees water in the spring before they are able to fly?" Answer, no.

It was then voted that the 3rd article of the Constitution be amended so as to make the annual dues 25 cents instead of 50 cents.

Reports of committees and election of officers was the first on the programme at the afternoon session. The nominating committee nominated the old board of officers, and they were duly elected, as follows:

President, M. F. Cram; Vice-Presidents, for Addison Co., G. C. Spencer; for Orange, C. B. Fisk; Lamoile, E. K. Savery; Chittenden, C. M. Rice; and Rutland, V. N. Forbes. Secretary, W. G. Larrabee of Shoreham; Treasurer, H. L. Leonard.

Mr. Leonard then read a paper on the sources of sweets of the country, in which he gave the sources of Vermont honey as follows, in this order from spring to fall: Poplar, willow, soft maple, rock maple, horse plums or wild plums, apple and fruit blossoms, dandelions, raspberry, clover (including alfalfa), basswood or linden, buckwheat, smartweed and goldenrod.

Mr. Leonard also read an article from Gleanings, on how to tell if there will be a honey-flow next year. Others spoke on the causes of flowers secreting or not secreting honey. Mr. Crane said that a thunderstorm would reduce the flow of honey even if it did not come nearer than 30 miles. Prof. Seeley said that if red clover could be produced with a tube half the length of the present one, the amount of honey and clover seed would be increased millions of dollars.

Mr. Forbes being absent, others spoke on his subject, "Labor-saving conveniences in the bee-yard and honey-house." Mr. Holmes advocated the use of bee-escapes in taking off comb honey. He also spoke on the causes of the heavy winter loss in 1904. He thought the long, severe winter, combined with other things, was the cause. Mr. Cram thought the heavy winter loss was not caused by the severe winter, or by the honey the bees had to consume, but by the condition of the bees themselves, and said the advantages of cellar-wintering were 10 pounds less honey to the colony, less labor to put in the cellar than to pack out-of-doors, less spring dwindling, and more perfect wintering.

Mr. Crane said the advantages of outdoor wintering were the opportunity to have a flight in winter, better spring protection, and earlier brood in spring.

G. W. Fassett then spoke on controlling increase.

The question-box was opened again, and this brought out a talk about the gypsy or brown-tailed moth, and it was thought it was not liable to be injurious to the bees or their forage. It was also stated that more alsike clover seed was sold by the dealers than either the red or mammoth varieties.

The question, "Will it pay to feed bees in the spring to induce brood-rearing?" was answered by Mr. Blackmer, yes; by others, no.

"Do bees gather more honey from white than alsike clover?" The general opinion seemed to be that more was gathered from alsike than from the white.

It was voted that the Executive Committee fix the time and place of the next meeting.

The treasurer's report showed a balance of $10.55.

The Committee on Resolutions submitted the following:

Resolved, That a vote of thanks be extended to the proprietor of the Addison House for favors shown.

Resolved, That a vote of thanks be extended to the Rutland Railroad Company for reduced rates.

This meeting was very interesting and profitable, and was quite well attended. W. G. LARRABEE, *Sec.*

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. MILLER, Marengo, Ill.

Bees Storing Water-Melon Juice.

My bees had access to a great many water-melons last fall, and I think they stored considerable of the juice. They now have dysentery.

1. Would the use of the melon-juice cause dysentery?
2. Can I do anything for them before warm weather?

OHIO.

ANSWERS.—1. Most likely.

2. A flight is their hope. Most likely there will very shortly be a day warm enough for it. If in the cellar, take them out the first day they will fly, and if it is still, and the sun shining, you will find they will fly at 45° in the shade—possibly at 40 degrees by your thermometer, for thermometers vary. Then put them back in the cellar the same day or the next.

Putting Bees Out Early—Largest Average Yield—Prevention of Swarming.

1. I often see it stated that bees should not be brought out of the cellar too early in the spring. In what way would it be any more injurious to them to do so than to the ones that are out all winter?

2. What is the largest authentically-recorded yield of honey from one colony of bees in one day, and also for one season?

3. How was the colony manipulated in the above instance?

4. Would it be too personal a question to ask what your average and also your largest (colony) yield was for 1904?

5. When you secured 300 pounds of comb honey from one colony how did you manipulate it, and how long was the flow on, or, rather, how many days were the bees engaged in gathering it? Was it all from one hive, or from one colony and its increase?

6. On page 186 of "Forty Years Among the Bees" is a plan to prevent swarming, called the "foundation plan." On page 188 you say that the plan worked well for the first two years, but not so well in 1902. Would you mind stating how it worked during the seasons of 1903 and 1904?

7. I keep from 10 to 15 colonies, but never get much honey—from less than nothing to about 30 pounds. I have the records of my wonderful "manipulations" of some of the colonies from June 1, 1903, to the present date. I would be pleased to send some of them to you if you think they might be of benefit as a warning how *not* to do it, and to show me when I made blunders. PENNSYLVANIA.

ANSWERS.—1. I don't know that I can give an entirely satisfactory answer. Experience has shown that bees taken out of the cell in February or March, before flying weather has come to stay, do not do as well as when brought out later, unless they are taken back immediately after taking a flight, and upon this last opinions are not yet unanimous. You want to know why a colony brought out too early isn't just as well off as if it had been out all winter. Possibly it is as well off, if protected the same way. But when brought out of the cellar there is generally no protection given such as is given to those left out all winter.

2. I can speak only from memory. I think G. M. Doolittle had 20 pounds in one day, and a Texas bee-keeper from whom nothing has been heard of late years, claimed 1,000 pounds in one season from a colony and its swarms.

3. I don't know, but I don't remember that anything was credited to special manipulation. Perhaps Mr. Doolittle will enlighten us—although I doubt that manipulation would have much to do with the gathering of one day, beyond manipulation to get the right number of bees of the right sort at the right time. But there's a big lot in that. There is just a little room for suspicion in the Texas case, with no intention to deceive, that some other swarm may have clandestinely united to swell the product of that one colony.

4. The average yield in 1904 was about 60 pounds of section honey per colony. The best colony gave 153 pounds (165 sections). It was nothing like so good a year as 1903.

5. The largest yield I ever had from one colony was not 300 pounds but 300 sections, about 279 pounds. The manipulation recorded is as follows: June 22, eggs in queen-cells destroyed; July 1, queen-cells destroyed, two frames of brood were taken away and two empty combs exchanged for them; July 9, queen-cells destroyed; Aug. 4, destroyed 1 queen-cell; April 23 the hive was opened to see if the queen was clipped (she was of the previous year); May 12 to see how the colony was doing (it then had more or less brood in 4 frames); and it was opened at least three other times to see if queen-cells were present, but none were found. I don't know how many days the bees were gathering, but I think most of the time from early in June till first week in September. The 300 sections were the yield of one colony; it had no increase. The yield might have been more if the two frames of brood had not been taken away—and it might have been less.

6. It was not used enough to tell.

7. Send 'em along. We often learn more by failures than successes.

Making Sugar Candy—Dry and Liquid Substances at Hive-Entrances.

1. On page 86 Mr. Dadant advises feeding sugar candy in the cellar. I should like to know how to make this candy, and other candies for feeding.

2. There is a whitish liquid running out of some of the hives in my cellar, and others have a dry substance like fine sawdust in front of the entrance. The hives from which the liquid comes seem to be wet and nasty inside. What is the cause of this? They have plenty of stores. Iowa.

Answers.—1. Don't any of the girls or women in your neighborhood make candy? If they do, just get them to make you some plain candy. Take best granulated sugar and about one-fourth as much water, stir the sugar into the boiling water, keeping it on the stove. The greatest care must be taken not to burn it, for burnt sugar is death to bees in winter. Keep trying it, and when a little dropped in a saucer grains, take it quickly off the stove, stirring it, and pour it into dishes slightly greased.

2. The sawdust-looking material is the gnawings from the cappings and other debris, and indicates nothing wrong. The liquid is the moisture from the vapors condensing in the hive. Your cellar may be too cold, and hive-entrances hardly large enough.

Queens Reared in the South—Serradella—Making Hives—Supply Dealers' Trust.

1. Will queens reared in the South be as hardy for a northern climate?

2. Do you know anything about the honey-plant called Serradella? The seed catalogs recommend it highly.

3. Most of the long-tongued queens advertised are spoken of as leather-colored. Are not the golden Italians as long-tongued as any?

4. I have 17 colonies now, and expect to have 50 colonies this time next year. I make my own hives. On page 100 the editor rather discourages this, but I make just as good a hive as can be bought for my purpose. You gave me a pointer on those cleats on the end. That was where the hives were weak, as they would warp in wet weather.

Whatever the Editor says about it, I do think there is a trust to raise prices. If not why is foundation higher this year? Wax is the same price. Indiana.

Answers.—1. Theoretically, no; practically, yes. A strain of bees continued for a long series of years in a warm climate would hardly be expected to be as rugged as one continued for the same length of time in a severe climate; but with the constant exchange from one part to the other there is likely to be no appreciable difference. If there is any Italian blood in them, they can not have been in the South more than half a century at most, and in that time they would hardly have changed much in characteristics.

2. I have seen mention in foreign journals of serradella, or serradilla (*Ornithopus sativus*), but know nothing about it.

3. There is much variation in golden Italians, and you will probably find some with longer tongues than others, and the same with the leather-colored.

4. The Editor is without doubt correct in saying it is better to buy one's hives than to make them. That's the truth for 9 out of 10, if not 99 out of 100. If you find it is better for you to make them, you ought by all means to do so, but you're the exception to the rule.

For anything I know the price of foundation is more than it should be, but because wax is no higher it does not necessarily follow that foundation should remain the same. Part of the cost of foundation is in the labor, and labor is higher than it was. If you are so situated that you can make hives cheaper than you can buy, it is possible that you could profitably make your own foundation, either with a mill or with the Rietsche press.

Cellar Wintering—Danzenbaker Hives—Introducing Queens.

1. I have always wintered bees outdoors, our cellar being too damp for them, but I lost so many last winter that I thought I would try cellar-wintering. About two weeks before it was time to put them away for winter I moved them a quarter of a mile where I put them into a neighbor's cellar with his bees. I expect to give them a flight in three or four weeks. Should they be put in the same place I had them before I put them into the cellar?

2. When I put them out for good would it be better to close up the entrance and bring them home, putting them on the summer stands, or leave them up there for a few days and then bring them home?

3. What is the best way to get them out of the cellar? This cellar is partitioned off for the bees, making it necessary to pass through two doors and up some steps.

4. Doesn't Doolittle give his bees a midwinter flight?

5. I introduced a fine-looking select-tested Italian queen to a colony before swarming, following the rules on the card attached to the cage. About a week later I overhauled the hives to find the queen doing fine work, but there were several capped queen-cells, which I destroyed. About a week later I noticed a number of bees in front of the entrance to that hive, and upon investigating I found the queen dead among them. I found a hatched queen-cell in the hive, and other capped queen-cells. I let them alone, expecting them to swarm, but they did not. In another week I again examined the hive and found the other cells all cut out, but this queen not yet fertilized. After that I looked several times for the queen, but could not find her. Nor was she fertilized. After spending hours looking for her (I gave the colony brood and eggs every now and then, but no cells were started), I tried different ways of introducing queens, but they killed every one of them. At last I put a light colony with a good queen (it being fall now) on top of this hive with a paper between them. They all went down into the hive and united nicely. But what was the matter with the colony? It meant the loss of about 50 pounds of comb honey.

6. I notice you don't think much of the Danzenbaker hive. I tried a few of them last summer, and I like them very well. I think I will get all of that kind. What is it that you don't like about them? Is it the changing from one hive to another?

7. Do you introduce all your queens now by the "drowning" plan? I haven't heard much of it lately. I had pretty

good luck by daubing the queen with honey, the bees accepting the queen nearly every time I used the plan.

I would like to have you visit me next summer. I am sure you would enjoy it. MICHIGAN.

ANSWERS.—1. It will probably make very little difference. If they flew very little during that two weeks after being moved, it may make no difference. If they flew much, some of the bees will be likely to want to go to their old stands. Even that will not be likely to do any harm, for they will be kindly received, and what are lost to one colony will be gained by the other.

2. Set them out and let them have a flight; then bring them home as soon as convenient afterward.

3. There are steps to my cellar, and a man just picks them up and carries them out.

4. I don't think he does. Not many do, and one of the things now under discussion is whether it is best or not.

5. Hard to tell. It is possible that the young queen was still present, up to the time of uniting the two colonies, and while they would accept no queen alone, they preferred the laying queen when it came with another colony.

6. The difficulty of changing is not the reason I don't use the Danzenbaker hive. If I were now using Danzenbaker hives entirely, I think I would be to the expense of changing to the dovetailed. The difficulty of handling closed-end frames without killing bees, is a serious objection, but I might stand that rather than to buy all new hives. A more serious objection is that ten times—yes, I think a hundred times, as much pollen is carried into sections as with the dovetailed. The closed-end frames must be warmer, I think, for winter, and if you can handle Danzenbaker frames as easily as Miller frames, especially as they grow older, and if you have no trouble with pollen in sections, the Danzenbaker may be a good thing for you. The manufacturers are good friends of mine, but I can not believe they are doing a good thing for bee-keepers by praising the Danzenbaker hive so highly.

7. I don't drown them, although I said I did. That was because I was not sufficiently acquainted with the English language. I only hold them under water for a short time, although sometimes till they appear entirely dead. I used that method last year with a good many, and it's safer than putting in an uncaged queen without the wetting, but in many cases not so safe as caging.

I thank you for your kind invitation, but can hardly accept.

Cutting Foundation—Placing Hives in the Cellar—Increase and Rearing Queens.

I took advantage of the club offer when renewing my subscription to the American Bee Journal to also obtain a copy of "Forty Years Among the Bees," which I have read, and like very much. Being of the number classed as *bee-owners* (I fear), having 9 colonies in the house-cellar with which I have had about 5 years' experience (the number of colonies varying from 3 to 15), I will take the liberty to comment upon some parts of the valuable book:

1. As per directions for cutting foundation (pages 142-144), would not the board mentioned, with its guides, work much better if those guides for cutting were each made of two separate pieces with just space enough between them to allow of the free passage of a 2-inch roller knife, which could be dipped into heated water between cuts? The space for the passage of said knife being 3¼ inches, 6½ inches, etc., upon the guide frame; strips ⅝-inch wide being used between spaces for cutting the ⅝-inch bottom starters. The knife is made of a thin steel disk, having a small hole in its center, through which a rivet holding the crotched handle passes.

2. In Fig. 109, page 301, I found a free advertisement in favor of Montgomery Ward & Co., for which I hope you received a nice donation. If you have not you *should*.

3. In placing the hives in the cellar I think it a very good plan to have the hive-bodies pitch forward to such an extent that any moisture that may condense on the covers will run to the end of the hive instead of dripping on the cluster, as it would if the hive stood level.

4. Do you think it would be profitable for me to increase by the method mentioned by you on page 260?

5. Would the field force of No. 4, as in plan given page 260, rear a good queen from young brood if I did not have a queen or cell to give them, when the made colony is placed where No. 4 was, No. 4 removed to a new stand, as per second part of plan given? I am interested in farming as well as bee-keeping, so when the bees need the most attention the farm requires most of my time, hence one of them must suffer. NEW YORK.

ANSWERS.—1. Not having tried it, I cannot say how it would work.

2. I made the mistake of not contracting beforehand that I was to receive a stipulated amount if that box should be allowed in the picture. I'll know better next time.

3. I'm a little surprised to find that the hives don't pitch forward in the book. They do in the cellar. Wait a minute, and I'll go down cellar and see how much * * * I find the hive at the back end is from 1 to 2 inches higher than at the front. I'm not sure there's any great advantage in it. Certainly the slant is not enough to make the drip run to the front. Wouldn't it need 6 inches or more for that? and so much slant would hardly be desirable. Besides, I doubt that water often settles on the cover in my cellar.

4. It's largely a matter of convenience. If convenient for you to use the plan, I think you'll like it and find it successful.

5. No, or at least I wouldn't be satisfied with queens reared in that way. So much depends upon the queen that the best is none too good. You would be trusting to field-bees to start cells, and nurse-bees are the right ones for that purpose. If you want the bees to rear their own queen, you might combine the two ways; first set your brood over No. 4 over an excluder for an hour or so; and then set in place of No. 4, and you would have young bees enough. But there might, in that case, be some danger of swarming at the maturing of the first young queen.

Streaks and Scum in Granulated Honey.

Last fall, when extracted honey in tanks began to granulate, I run some into paper oyster pails. When it became thoroughly candied in the paper pails, it had a white scum-like gum on top, and also white streaks running irregularly through the honey, so that it had a mottled appearance, when cut through. When winter set in I melted some of the same honey in the tanks, and run it into paper pails. When the honey in these latter pails were fully candied again it was all one solid color—no streaks running through it, and no light shades on top or on the sides.

How can I prevent these light streaks and scum-like coverings, without re-melting before running into the paper pails?

What would be the effect of running into the paper pails as soon as the honey is cleansed, after extracting?

MICHIGAN.

ANSWER.—I cannot speak with authority, but I'll say how it looks to me, and if I am astray I hope some of the good brethren with experience will straighten me out. I suspect that the streaked effect might be caused by different kinds of honey settling in different strata in the tank. It might also be caused by air-bubbles being caught in the partly-granulated honey. When the honey was melted, the air-bubbles could escape. It is quite possible that if the honey was run directly into the pails as soon as cleared it would be all right.

Winter Hive-Entrance—Afterswarms—Alsike Clover—Piping of Queen—Alley Traps.

1. I winter my bees on the summer stands, having them in winter-cases with inch and a half sawdust between walls of the winter-cases and the hives. I allow an entrance of only 2 inches by ¾. Is this too small?

2. As to afterswarms, I have all queens clipped; hive the swarm on the parent colony's stand, removing the parent colony to a distance. Parent colony still insists on sending out an afterswarm. Would it be better to destroy all queen-cells in the parent colony as soon as the young queen is heard piping, so as to be certain of allowing *no* afterswarm?

3. Can virgin or unfertile queens pass through queen excluding zinc?

4. Would 70 or 80 acres of alsike clover planted on the farm where the apiary of 50 colonies is located make any *appreciable increase* in the average of surplus honey stored by the bees?

5. What should I consider a fair *yearly* average for 50 colonies in this State?

6. Colony A swarms. Will a young queen be *always* heard piping in about 7 days thereafter?

(a) Will a colony ever swarm without the young queen's piping being heard 7 days after?

(b) Will a colony that has swarmed once send out an afterswarm if the young queen is not heard piping in 7 days?

(c) Finally, is a young queen's piping a certain sign of the intention of the colony's sending out an afterswarm, and the *not* hearing her piping a sure sign that no afterswarm is to be sent out?

7. What is the use or purpose of the bee-space now put behind the Alley queen and drone trap? Is it not just as good, for all practical purposes, without such bee-space?

VIRGINIA.

ANSWERS.—1. It is probably large enough, although I don't know how cold it is with you. If your bees are located so that there is no chance for cold wind to blow into the entrance, it is possible that a larger entrance might be better.

2. Destroying all cells after queen is heard piping ought to make a sure thing of it, unless it might be possible you had waited till the bees were just on the point of swarming when you cut out the cells, and would swarm without finding out that no cells were left. I don't know whether such a thing could happen or not. But hold on; 'fess up, now, didn't you move the old hive to a new location at the time of hiving the prime swarm? If you did, no wonder you had a second swarm. That's not the way. Hive the prime swarm on the old stand, and put the old hive close beside it; then move the old hive to a new stand a week later. You see, if you move the old hive to a new stand right away, so many young bees will hatch out by the time the young queen emerges that the colony will be strong enough to swarm. But if you put it close beside the old stand, and then move it a week later, all the field-bees will, on their return from the field, go to the old stand and join the swarm. That will greatly weaken the stump, or mother colony, and it will hardly feel it can afford to send out another swarm. Still further, the field-bees going to the old stand, there will be no honey coming in from the field, making them think, "Well, as the honey-flow has stopped entirely, we most certainly would starve if we should attempt to set up housekeeping in an empty hive; so let's not swarm."

3. A laying queen looks much larger than a virgin, but it's the abdomen that's larger not the thorax. It's not the abdomen, but the thorax that prevents a queen going through the zinc, and I think the thorax of a laying queen is no larger than it was when she was a virgin; so she ought to go through no more easily one time than another. But a virgin queen probably makes a more vigorous effort to go through, so she might go through an aperture through which she would not force herself after she settled down as a laying queen.

4. That depends. If the bees had all they could do on basswood or some other heavy yielder, the alsike would make no appreciable difference. If they had nothing or very little else, the alsike would make not only an appreciable, but a very big difference. I should suppose 80 acres would give 50 colonies more than they could possibly do.

5. I don't know. Possibly 1,500 pounds.

6. I wouldn't like to be too positive about it, but I think the young queen always pipes before she is many hours out of the cell; usually about eight days after the issuing of the prime swarm, although it may be 2 or 3 days sooner than that time, and possibly several days later.

(a) If you mean a second swarm, I think the queen will always pipe before swarming, perhaps not often as soon as 7 days.

(b) I don't believe it will send out an afterswarm till after the piping; but, as before intimated, the 7 days is not right.

(c) Please allow me to answer the spirit rather than the letter of your question. You may rely with much confidence upon the noises made by young queens in deciding whether an afterswarm will issue or not. Eight days after a prime swarm has issued, place your ear against the side of the hive in the evening when all is still, and if swarming is planned for the next day you will hear a young queen piping and one or several yet in their cells quahking. The quahking is not so shrill as the piping, and seems more hurried. If you hear *both* the piping and quahking you may confidently expect an afterswarm, generally as soon as the next day. If you do not hear it, you may as confidently say, "No swarming to-morrow." In most cases you may settle it one way or the other by listening that one evening. But, as before intimated, there may be a variation in time. If the weather has been wet and cold, the prime swarm may have been delayed in its time of issuing, making the time till the issuing of the second swarm just that much less. Or, the time may be longer, and it may be worth while to listen on the evening of the 9th day or later. But you needn't listen any later than the evening of the 15th day. As said before, I think the young queen pipes in all cases, swarm or no swarm, but there must be both piping and quahking to make you expect a swarm, and if there is to be no swarm the piping will be neither so loud nor so long continued, and you will not likely hear it at all.

7. I don't know. I haven't seen traps made very lately. Perhaps Mr. Alley will tell us.

Bees Under the Snow—Feeding Bees—Candied Sections.

1. My colonies are buried under the snow. Will they smother? I have planer shavings on top to let the air through.

2. What is the best way to make candy for bees, and how would you feed it?

3. Which is the best feeder to use in feeding either honey or sugar syrup, so that the bees will not be disturbed very much?

4. I have some honey that is a little sour. Will it injure the bees if I feed it to them in the spring?

5. I have some sections filled with candied honey. Would it be well to melt them, feeding the honey to the bees and saving the wax?

WISCONSIN.

ANSWERS.—1. Enough air works in through the snow so there's no danger of smothering. But look out not to let the entrance become filled with damp snow and then freeze solid.

2. Just the same as your women-folks make it. Stir the sugar into a very little water in a vessel on the stove, and when a little dropped into cold water is brittle it is done. Lay the cake of candy over the frames and cover up warm.

3. The Miller feeder, the Doolittle frame feeder, or the Boardman entrance feeder can be used with very little disturbance.

4. Not after they are flying every day or so.

5. There is probably no better way. The honey will also be good for table use.

OUR TOIL DOTH SWEETEN OTHERS

✣ Contributed ✣ Special Articles

Producing Comb Honey With and Without Separators.

BY M. A. GILL.

I see the question, "Can marketable honey be produced without separators?" has been passed upon by the Board of experts, on page 20. When I look over the list of names and see the decided opinions where the answer is "No," I am reminded of the case where a prisoner in jail had sent for his attorney who, after viewing the case, said, "Why, they can't put you in jail!" Whereupon his client answered, "But I am in here!"

Is it possible that these experts are not aware of the tons upon tons, and carload after carload of honey that goes to market every year that has never seen a separator? Is it possible, too, that they are not aware that there are a number of markets that prefer this kind of honey to the most perfect separatored honey that was ever produced? Why is this so? It is because honey is sold by weight there instead of upon its merits.

Not all markets are alike, however, as some jobbers prefer, and their market demands and appreciates, a nice, straight article, weighing from 21 to 22 pounds per case of 24 sections, which is all that a carload can possibly weigh, as an average, where the honey is produced with a full set of separators.

When sections were first invented they were made intending to hold one pound of honey, and they met the requirement very well, weighing from 15 to 17 ounces. Soon after separators were adopted, using the same sections, cutting off one-half of a bee-space, the weight dropped to from 14 to 16 ounces, much to the detriment of nice, straight separatored honey, when sold in markets where they care nothing for quality but are stricter on the matter of weight.

I have in mind a carload of honey that went east within the past three years, to a large wholesale dealer and jobber. In the car were a few hundred cases of almost perfect honey, fit for exhibition purposes, and weighing from 21 to 22 pounds net, average per case. The balance of the car was made up of unseparatored honey, many sections being so bulged and pussy that they would vary from 12 to 20 ounces, but, as a whole, would weigh from 22 to 25 pounds net, per case; but it was almost impossible to take a section from the case without breaking the cappings.

When loading the car I thought how I wish it was *all* like the first, then I knew my fastidious buyer would be pleased. But imagine my chagrin when the buyer drew on me for damage on the first-mentioned honey, and has never ceased to sing the praises of the bulged and pussy stuff, saying it brought him from 25 to 50 cents per case more than the "light honey," as he called it. This honey was sold to the jobber by the case.

Now, most writers, and some editors, teach that he did right—that comb honey should *always* be sold by weight, claiming their conscience bothers them if they know a customer gets an ounce more or less than actual weight. Right here I want to plead guilty that my conscience is not so tender, and that I believe in paying a premium for quality. Hence I buy my oatmeal by the package, and my pills for their quality instead of how many there are in a box.

And if I have two cases of honey, one weighing 22 pounds net, and it is perfect, and the sections can be handled like a child's toy blocks; and another weighing 25 pounds net, but is bulged and cannot be handled without causing it to leak, I claim that right to offset quantity with quality.

And if you are not going to allow us this privilege, won't you please have the manufacturers make a little difference in the size of the sections so that each will have a fair chance?

Tell the board of experts, who say marketable honey cannot be produced without separators, *that it is* produced and sold by the carload, and even preferred (in some markets) to the finest separatored honey they can show up.

These conditions will exist so long as both use the same size section-box, and so long as honey is doled out by the ounce and no premium paid for quality.

We can only deal with these conditions as they exist, and the facts are simply this, that there are 24 (so-called) one-pound sections in a case, and people have been taught to expect (approximately) 24 pounds of honey. Without separators, they can get it, but with separators 22 pounds net is a high standard of excellence for a carload of 30,000 pounds of No. 1, and 20 pounds net for No. 2.

Then why not adopt a universal standard of weight and excellence? It would surely increase the sale of honey, because dealers would push the sale of it.

I have known many dealers (retailers) who abandoned the handling of comb honey, because of its mussiness, for it would daub up the counter and everything near it. Still, it had the one merit of being heavy honey. Juggle with these conditions as much as you please, and the fact will remain that 22 pounds of nice, separatored honey is truly worth more than 24 pounds, or even 25 pounds, of bulged and leaky stuff—and yet the "stuff" brings the most money.

For years I have been producing both kinds, and carefully watching the market demands, and I must confess I hardly know now which to adopt, whether to use all separators and produce the lighter but more fancy honey, or throw away all separators and produce all heavy honey.

I find the extreme East and Northern markets prefer quality to quantity, while the more Southern and Western markets prefer quantity to quality. I have come to these conclusions after handling from two to five carloads per year for the past five years. Boulder Co., Colo.

Species and Races of the Honey-Bee—Other Matters.

BY PROF. A. J. COOK.

One of our most prolific writers, in scientific entomology, is Dr. William H. Ashmead, of the United States National Museum. He has been one of the leaders in systematic work in the Order (Hymenoptera) which includes our bees. This gives his opinion great weight in this Order, and so we are greatly interested in his revision of the genus of the honey-bee. In Volume 6, No. 2, of the Procedings of the Washington Entomological Society, published in May, 1904, he gives his views of this group, which must interest all who care for bees or give study to these interesting insects.

Dr. Ashmead divides the old Linnæan genus Apis into 2 genera: Apis and Megapis. This latter is a new genus, and is appropriately named, as the prefix means "large." The form and position of the eyes and ocelli and the wing structure, give warrant to this change, in the opinion of Dr. Ashmead. On page 46 of the latest edition of my Bee-Keeper's Guide, (1904 edition), the reader will find the species and races described.

Two species are included in this newly-founded genus. One is the much discussed "dorsata," which we will now know as "Megapis dorsata," instead of "Apis dorsata," the name which we have used to designate it in the past. This species is found on the islands off Asia from Ceylon, where, as we know, Mr. Benton found it, to our own lately acquired possessions, the Philippines. The bees are very large, black, with yellow bands crossing the abdomen. In some cases nearly the entire abdomen is said to be orange-yellow. The other is Megapis zonata, also found in the Philippines, and in some other islands. These are blacker than are the others, but not as large. The first two segments of the abdomen are lined with whitish.

In the genus Apis, Mr. Ashmead places Apis mellifera, which, as we know, has been carried to all parts of the world. I suppose it originated in Asia; Apis cerana, of China and Japan; Apis nigrocincta of China, Malay Peninsula, the Philippines and India; Apis Indica, of India; Apis nigritarum, of Africa; Apis unicolor of Madagascar, and Apis florea of India. Dr. Ashmead suggests that the last should really be separated, and though while he gives it as belonging to the genus Apis, he suggests that it be removed to a new genus and suggests the very appropriate name of Micrapis. While the changing of names and the undue increase of names in describing and writing of plants and animals, is not to be encouraged, yet I believe that these changes of Dr. Ashmead are warranted, and that we may well use these new names in our future references.

GOVERNMENT AID TO APICULTURE.

I read with much interest Mr. Benton's address at the St. Louis Convention. I think it was correct for the most part, though in one or two points I know the truth to be a little different. The Late Dr. Edwin Willets thought that the Department of Agriculture should do more for bee-keepers. As Assistant Secretary of Agriculture, he sent Dr. Riley to visit me to confer as to aid that might be given. I suggested that experiments in growing honey-plants exclusively for honey, and the importing of foreign bees, were hopeful lines for research. I also urged strongly that Mr. Benton be secured to do the latter. I urged that his experience would specially fit him for this work. He was then in Europe and I suggested that the work could be cheaply done. There was an attempt to carry out both of these suggestions. Mr. Benton was engaged, but Dr. Willets wrote me they found that they could not send a man abroad. Lately a more wise and liberal construction, or better laws have been framed, so that now we have men sent to all parts of the world to get better plants and animals, if they are to be found.

I stated that I did not believe that it would pay to plant especially for honey, but that much of it was being done, and that careful experimentation could alone determine. It would pay to settle the matter once for all. I commenced the work, carefully prosecuted it on an extensive scale, and I think settled the matter, thus doing what was proposed. This work was carried on by me aside from my regular college work which was severe besides, and was done by me entirely as a labor of love, as I never received one cent for doing it. I found I was unable to do more, and thus refused further work.

APIARIAN EXPERIMENTS NEEDED.

I am glad that the Department has concluded to take up the work again. Surely the matter of bee-keeping is important enough more than to warrant research along lines that can not well be carried on by the practical man. I believe the two lines that should receive attention are these: Importation of new races and species, and the improvement of those that we have; and the study and prevention of diseases that destroy our bees. The first promises much. We have made wonderful advance in improving other races of our domesticated animals, and our plants as well. It is said that the corn has been bred up in Illinois so as to make it produce ten more bushels to the acre. Who knows but what our bees could be improved so as to produce ten more pounds to the colony? Surely a Burbank hold of this matter might give us results that would startle the world. I certainly am in favor of the utmost along these lines, and believe that we all ought to work to have the very best research carried on to a finish.

A VERY HOPEFUL OUTLOOK IN CALIFORNIA.

It is unnecessary to say that the matter of rain in Southern California is all-important. With it we have great crops, and phenomenal production of honey. We have been having great rains, not only timely, but they have come so slowly that every drop has been saved to the soil. We now have about eleven inches—as much as we had in all the season last year. At this time last year we had less than one inch. Thus we see that our prospects for this season are very flattering. We shall be very sure of not only a good crop of honey, but we shall probably have a very prosperous year all along the line. In all the eleven years of my sojourn here, we have never had so bright an outlook as we have to-day.

HONEY PRODUCT FOR CALIFORNIA.

Mr. C. O. Wilder, of Vermont, asks, "What would be the money value of the honey from 50 colonies of bees in San Diego Co., Calif., and in what seasons in that section are the bees active, and when idle?" I think we can count on an average of 75 pounds per colony. Some years the yield is very much more, but in others, like the one just past, the bees get no honey at all. It all depends on the rainfall. This winter we are getting fine rains, and the bee-keepers may rejoice in the glad prospect of a maximum crop the coming season. April, May and June are the honey months of Southern California, though the bees may gather in every month of the year.

MORE INFORMATION ABOUT CALIFORNIA.

Mr. F. P. Briggs, of Massachusetts, "Missouri," and several others, ask for more information concerning California. Work here is begging for good workers. I do not believe that such need fear. Pay is better for orchard work than in the East. I do not think the cost of living here is more than in the East. I find it as cheap to live here as it was at Lansing, Mich. Chickens do well here, and there is no danger of overdoing this work. The Chinese raise the most of the vegetables, but I pity an American that would suffer from such competition. The schools are of the very best. Here, as elsewhere, all depends upon the man. The good man finds work, and success; the indifferent one lags in both.

HONEY OR SUGAR SYRUP FOR BEES.

Mr. O. A. Stewart, of this State, asks if sugar syrup is a good and sufficient food for bees. Yes, it is certainly as good as honey. Of course neither is enough. The bees, when breeding, must have proteids, which they do not get in either honey or sugar syrup. This is furnished by the bee-bread or pollen. There is a trace of this in the honey, but practically none—none to speak of. We have proved it over and over that sugar syrup is very excellent for a winter food for bees. Mr. Heddon used to argue that it was better than honey, as it was entirely free from proteids, and so bees could not breed and were better with the less activity. I should fear neither good honey nor good sugar syrup.

Los Angeles Co., Calif., Feb. 8.

The Average Length of Bee-Life.

BY G. M. DOOLITTLE.

Picking up a mislaid letter, bearing the date of September 3, 1904, I find the following in it:

"About the 20th of last June I made a colony of bees by setting the combs and most of the bees that were on them, out from the old hive into a new one, leaving one comb containing brood in the old hive, and filling it out with empty combs. The bees seemed to work well from both hives. July 10th I was called from home, and did not return till August 22. On my return I went out to see the bees. I found those in the new hive all right; but those in the old hive were nearly all gone, only about 100 or 200 being left. What do you think was the trouble? Why did these bees leave the hive, while the others staid all right? Please answer through the columns of the American Bee Journal."

This letter should have been answered sooner, but got covered up with other matter in the rush of work which is generally at its height during the time of getting honey ready for market. I have answered the letter to-day, privately, telling why the delay; but in thinking the matter over I have concluded to say a few words further regarding it, as it seems that there is much ignorance along the line of the length of life of bees, from the many letters I get which show a lack of knowledge regarding their average life; and this life has much to do with the successful making of swarms, or increase of colonies by any of the plans made known, outside of natural swarming. And with natural swarming, it is well to be fully posted in this matter, else we may lose the old colony by its failing to rear a queen from the queen-cells left, from some cause or other.

It seems strange to me that any one should be ignorant on this subject when one experiment will tell the truth in the matter, and convince the most skeptical that the average life of the worker-bee is about 45 days during the working season. Take a colony of black or German bees, for instance, and about June 10 take the queen away and introduce an Italian queen, keeping record of the date on which the change is made. In 21 days the last black bee will have emerged from its cell; and if the Italian queen went to laying immediately, the first Italian bee will have made its appearance, which fact should be jotted down also.

At the end of 45 days from the time the last black bee came out of its cell, no black bees will be found in that colony. At 40 days many will be seen, but they grow less and less each day, so that on the 44th day it will be very few indeed that will be left. From this, the questioner and the reader will see why there were only a few bees in the hive of the questioner when he returned home, if we take it for granted (which was undoubtedly the fact) that the bees in the old hive failed to get a laying queen from the frame of brood which was left with them. Having thus failed, the last bee in this frame of brood would have emerged 21 days later, or on July 11, and 45 days from that time would have been August 25, so that there would have been only three days of the bees from that frame of brood left, on the return of the questioner. And if there were from 100 to 200 bees left on August 22, they certainly held out well.

This length of life of the bees of which we have just been talking about is for the summer months, and does not apply at all for those of the fall, winter or spring. The life of the bee seems to depend on the work it does, or on its activity. Thus when it labors the most, its life is the shortest. Hence it comes about that, through the inactivity brought on by the advent of cool and cold weather, the individual bee can live from six to eight months. This is proven by changing the queen as before, only it is to be done this time about the middle of September, in this locality. Soon after the first of October the last black bee will be out of its cell; but I have often found black bees in such colonies on the first of June of the next year, and in one instance, there were a few still remaining on the first of July; but that year the bees were kept in their hives on account of bad weather very much of the time previous to this. Also, when spring opens there will be but a few Italian bees in the colony so treated, which shows that very little brood is reared from October till April, where the bees are wintered in the cellar; as well as to tell us that more bees die in two months in the spring than during five or six months of winter.

The life of the drone is regulated very largely by the workers, for they are usually driven off or killed by the workers long before they would die of old age. Any sudden cessation in the flow of honey from the fields is often sufficient reason for their being driven out to die, or the killing of them by stinging, if they are persistent in staying in the hive; so it is hard to tell just what age they might attain to, were they allowed to live to the age allotted to them, without persecution. Most apiarists think that they would live about the same length of time the workers do; but I am of the opinion that they are a little shorter-lived. It is a rare thing that any drones are allowed to stay in the hive after the honey harvest is over for the year; still, I have a few reports of drones which have wintered over, and I have known of a few doing so, and that in a colony having a fairly good queen. But the hive was crowded to its utmost with honey during the fall. Where I have tried to keep drones in a queenless colony to preserve them, they would all be gone at the end of about 40 to 42 days.

The average life of queens, as I find it in my apiaries, where a colony is allowed to stay in a normal condition, is about three years, although I have had one or two live nearly six years, and several four and a half to five years. They live also in proportion to the work they do, or, more properly speaking, in accordance with the number of eggs they lay, as egg-laying is the only work they do. Under the present system of management the queen is often coaxed to lay as many eggs in two years as she usually would in three if in a tree or box-hive; hence most apiarists think that all queens should be replaced after the second year, with those which have just commenced to lay. However, I do not make this a practice; for I find that, as a rule, the bees will supersede their own queen when she gets to be too old to be of service to them; so I trust the matter to them, believing they are less liable to mistakes along this line than I am.

Onondaga Co., N. Y.

⁂

Rendering Old Combs Into Beeswax.

BY C. P. DADANT.

Mr. Dadant:—I read in your instructions on rendering combs that they should be soaked in a tub of water before rendering. Shall we set them up straight in the tub or lay them flat? They seem to soak water best when set up.—A Reader.

The old combs, such as are generally taken from very old colonies, contain more than nine-tenths dirt and cocoons. It is therefore of the greatest importance to put them in such condition that the wax will not soak into the residue, since there would be hardly enough of it fairly to moisten the dirt. That is why so many people think that there is no longer any beeswax in old combs. The only method to keep the wax from soaking into the rest when liquefied is by wetting, for beeswax will not stick to anything that is wet. So we instruct the bee-keeper to soak the combs. It matters little how they are soaked, but if they are very dry it will not take one long to find out that they are difficult and slow to soak. But if you leave these old combs in the shape given them by the bees, each of those cells, coated as it is with the cast-skin of a larva, will retain its shape and make a nice little nest for some of the liquid wax to sink into. Anyone who has rendered much beeswax and old combs has noticed occasionally a cell full of clear wax, which may be removed only by a press.

Now, our method is to break and crush these old combs out of shape, so that the cells may be closed or flattened. In this shape they will sink in water more readily. But there is a very good way to compel the combs to become soaked, and that is to put the stuff all in a coarse sack and load it down with bricks or stones at the bottom of a tub filled afterwards with water. You will notice that in a short time the water will begin to take color. When the entire lot is well soaked, it may be melted with hot water. No hard water should be used.

Here permit me to explain: Hard water contains mineral invariably, in fact, it would not be "hard" unless it did. Some of this mineral will act on the beeswax and damage it. For instance, the least amount of iron in the water will darken the wax. That is why in some localities bee-keepers seem entirely unable to produce nice, bright beeswax. If they were to use rain-water there would be no trouble.

The man who has a wax-press has no difficulty in getting out all the beeswax, or nearly all. But even he who has a press needs some direction for its proper management. It is just as necessary to soak the combs when using the press as when melting the combs and skimming the wax off the top of the water, because whatever the residue will soak will be impossible to secure, and much less will soak into the residue if it is already wet, when the wax is melted, as I said before. But those who use the press are all liable to go too fast and use too much power. If the press is filled with well-melted old combs, and kept hot, a turn now and then is all that is needed, and one hardly needs to use more power than what may be applied without effort with the hand on the screw. It is just like pressing grapes for the juice—if you try to get it out all at once you simply imprison some of the juice so that it has no means of escape; while if you give it time to slowly leak out, you will get more result with less effort.

With the man who has no wax-press, although there is more difficulty in rendering the combs, still nearly all the wax may be secured by using plenty of water and skimming the melted wax off the top of the kettle as he goes. If the worst residues are put into a sack with very coarse texture, and this is turned over and over under hot water, nearly all the wax will ooze out. Of course this wax must be rendered once more, in order to remove the remaining impurities.

Rendering combs with the solar extractor will do well for those who have but little residue, and especially for the odds and ends of the apiary, as they are gathered during the summer. When they are rendered by sun heat, they are out of the way of the moth, while the keeping of these is difficult till they are rendered, especially during the last of the summer months.

But the solar extractor is not at all fit to render old combs. The beeswax in them soaks into the cocoons, and nothing is left for the apiarist.

In rendering beeswax care should be taken not to over-boil it. The mealy residue at the bottom of cakes of beeswax is nothing more nor less than water-spoiled beeswax—beeswax that has been beaten into a sort of meal by boiling water. Sometimes a bee-keeper will spoil his entire product in this ugly way. A good boil is all that is needed.

Do not use sulphuric acid in rendering wax. You will be likely to use a half-pint where ten drops would be too much, and it will give your product a sickening and bad smell.

Hancock Co., Ill.

⁂

Curiosities and Myths of Bee-Literature.

BY ARTHUR C. MILLER.

Among the curiosities of bee-literature, few strike the student more forcibly than the persistency with which many ancient myths about bees are repeated, often being stated as the results of the writer's own observations or quoted as if of recent discovery. Some are too absurd to receive serious consideration while others seem plausible until subjected to a comparison with the actual habits of the bees.

An accurate interpretation of the actions of the bees is not always possible without a knowledge of the anatomy of the bee, and, again, deductions as to the functions and mode of using various organs are not infrequently wrong, owing to lack of full knowledge of the bees' habits. Also there is often a strange confusing of cause and effect.

Such things would be of small account to practical bee-keeping were it not that many practices are based on the beliefs, and when the latter are wrong the former are faulty and costly to the bee-keeper.

The legend about the snail, which, getting into the hive, and the bees being unable to remove it and fearing the contamination of decomposing matter, hermetically sealed to the floor with propolis, is as old as bee-keeping. It reappears with every new bee-book, being cited as an example of the sagacity of the bees.

The sealing of the snail to the floor was merely the result of the effort of the bees to fill crevices which they could not enter or penetrate with their mandibles. They just as readily and thoroughly fasten a pebble in the same way.

The ramming of pollen into the cells with the bee's head as the rammer, is another myth which dies hard. The work is done with the mandibles, as may readily be seen. The bee's use of her tongue is so greatly misunderstood as almost to warrant the statement that nothing is known about it. How long and how persistently it has been asserted that a worker holding out her tongue toward another bee is *offering* food, yet the fact of the matter is that *the thus extended tongue is always seeking or asking*.

Most instructions for introducing queens cite the "offering of food" as one of the details to be observed. The many and constantly-recurring failures despite the presence of the supposed "peace indicating offering" strangely fail to raise suspicion as to the tenability of the theory.

CHANGING NECTAR INTO HONEY.

Another error most solemnly reasserted from time to time is that bees ripen the honey by creating a high temperature, establishing a rapid circulation of air and then pumping the nectar back and forth on the tongues, that it may be exposed as much as possible to this warm draft. It is a very pretty example of the cart before the horse, coupled with an ingenious but erroneous theory as to what converts nectar into honey.

The heat is caused by the action of the bees in treating the nectar, and the heat together with the moisture compels the bees to create the draft. The belief about bees pumping the nectar up and down the tongue seems too absurd to warrant consideration were it not so often stated as fact. Some writers have made the theory even more absurd by stating that the bees crook the tongue slightly, that the drop of nectar may not be knocked off by contiguous bees.

A knowledge of the structure of the bee's tongue, together with a little observation of the bees at the ripening work, will quickly convince any unbiased person of the inaccuracy of such statements.

A description of the actual operation is subjoined, and may be readily verified. It is part of the results of a long series of studies into the functions of various organs of the bees. The nectar-treating worker becomes quiet, generally on the comb containing nectar or honey, then the mandibles part, the mouth opens and becomes filled with a drop of fluid. This drop extends outward between the mandibles, filling the space and covering the openings of gland system No. 4, of Cheshire and Cowan. (For description of functions of these glands see Cowan's "Honey-Bee," pp. 120 and 121.) The drop of fluid remains in this position for a period of several minutes at a time, and while it is there the chin is slowly and steadily moving up and down—exactly as if the bee was chewing something in her mouth—and this causes the drop to pulsate slightly. During this time the tongue is folded up behind the chin and *takes no part in the process of converting the nectar into honey*. After a time the drop of fluid is swallowed and after a moment's pause another appears and the process continues.

Each "mouthful" is equal to more than half of the capacity of the honey-sac. The tongue of the bee could not begin to care for the quantity of fluid treated by her in her mouth, and, furthermore, if treated on the tongue it would be beyond the reach of the gland secretions. The primary cause of the conversion of nectar into honey is the action of the secretions of the glands; the evaporation of moisture is secondary. Providence Co., R. I.

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OTISVILLE, PA., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. FRED FODNER.

Reports and Experiences

Getting Supers Ready in Winter.

Perhaps I should not contradict anything said by G. M. Doolittle, yet my experience has been directly the opposite of what he advocates on page 54, where he says:

"All the foundation used in both sections and frames in my apiary during the past 15 years, was placed where it is to be used by the bees during the months of December, January, February and March."

Last winter I fixed my supers in the way he mentions, and when I came to get them to place them on the hive, lo and behold! 3 starters out of every 4 were fallen to the bottom of the super, so that I had to go through every super and fasten them again. Owing to this experience I shall wait until warm weather to fasten starters.

CHARLES M. HARRIS.

Schoharie Co., N. Y., Jan. 30.

Selling Honey in the Home Market.

I notice that some of our bee-keepers seem to have little difficulty in selling their honey in their home or near-by markets. In 1903—that fine honey season—I secured from 15 colonies, spring count, about 4000 pounds of honey. Very few people came to the house, and I would have sold little in that way, but

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L. L. Olds Seed Co—Many of the thousands of farmers who visited the Louisiana Purchase Exposition will remember with pleasure the exhibit of the L. L. Olds Seed Company, of Clinton, Wis. Those who have received the Olds catalog for 1905 have again been pleasantly reminded of their visit to St. Louis by the half-tone view on its first page. They will also notice that the exhibit by this concern captured a gold medal. The gold medal standard of seeds and potatoes—potatoes are one of L. L. Olds Seed Co's specialties—is certainly the quality that the farmer and gardener should plant in order to secure the best results. A careful perusal of their catalog shows what the L. L. Olds Seed Co. is prepared to do for those who will place their orders with them. Any who are not already posted in this regard should obtain a copy before making out their orders for the coming season. Please mention the American Bee Journal when writing.

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are claimed by some swine breeders to be superior to the Poland-Chinas will be fully discussed in the March issue of that authoritative stock paper

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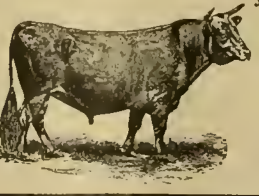

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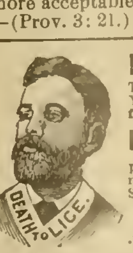
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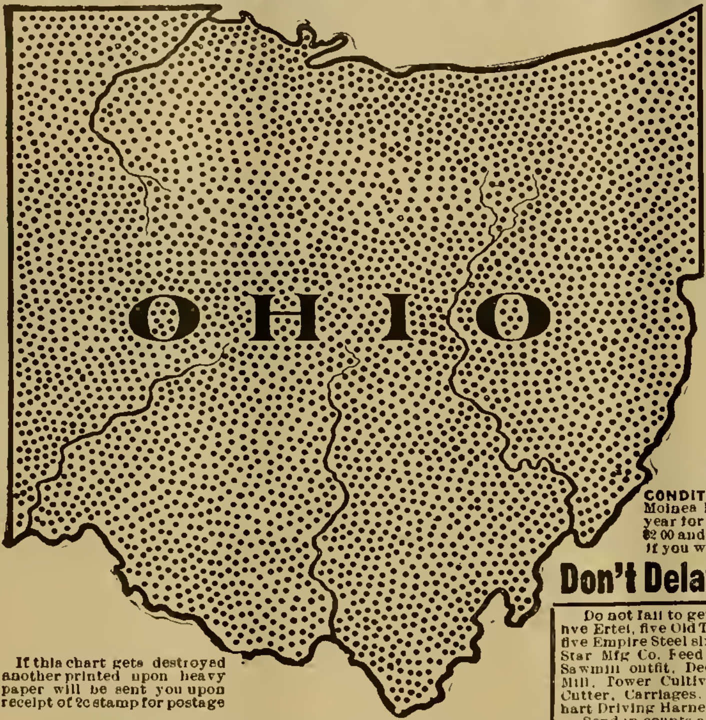

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TEST OF SKILL—This contest is not to be confused with the guessing or estimating contests which are not permitted by the Post Office Department. Our contest is a test of skill in counting and getting up best plans and the best man wins It depends upon you. There is no guess or chance about it. Do not hesitate about entering but get your counts in at once.

CONDITIONS:—$1.00 pays for one full year s subscription to both the FARMERS' TRIBUNE and Successful Farming and entitles you to one count. $2.00 pays for two years and entitles you to three counts and makes you eligible for the $50.00 prize.

$50 PRIZES—We believe everybody should have three counts so they can have one each side of what they think is correct to be more sure to hit it To encourage this we will give $50.00 extra to winners of 1st prizes if they have three counts Remember if you have one count you get 1st prize only but if you have three counts you get $50 extra.

AWARDS will be made as follows—The person giving correct or nearest correct count will get first prize. Next nearest correct, second prize, etc. In case of a tie for any prize it will be awarded to the person giving best plan for counting the dots. State whether you enter ladies' or gents' contest, as one piano goes to lady sending best count or plan the other to gentleman sending best count or plan.

DON'T FAIL to enclose remittance with your letter giving counts, as we cannot enter you as a contestant until it is received.

JUDGES—The awarding of prizes will be wholly in the hands of disinterested judges. We have chosen bankers, ministers, public officials, etc., to act as judges in our contests. Ex-Governors, Mayors, Treasurers, etc., have acted as judges. We are bound our contests must be absolutely fair.

OUR FINANCIAL RESPONSIBILITY—As to whether we are abundantly able to do as we say, we are glad to refer to Sioux City Stock Yards Co. or First National Bank of Sioux City

In the event more than one person should submit the same plan and this was considered the best plan by the judges, each person so tieing will be asked to tell in 50 words how best to improve Successful Farming The one making best suggestions gets first prize, next best next, etc Understand this is only in case of tie in plan, which is not at all likely

Publishers FARMERS' TRIBUNE, Sioux City, Iowa.

I enclose $........ . . . .. for .. . ..year's subscription to both FARMERS TRIBUNE and Successful Farming and I wish to enter the

. . . . (write ladies' or gents') Contest. If $2 00 is paid send three counts; if more than $2.00 send one count for each $1.00 over $2.00. If only one year is paid send only ONE COUNT The extra $50 go only to those having THREE or more counts entered.

My Count is: (1)..............................(2)..............................
(3)..............................
Name .... P. O.............................. State ....
Remarks: My plan of counting is ....
Dept C

PRIZE WINNERS IN PAST CONTESTS

A Piano for $1.00. Surely people may enter your contests knowing that they will receive fair treatment. How glad I was to win a piano for so small an amount and wholly unexpected. The paper alone is worth all I paid. MRS. L. W. NOTT, Marion, Ia.

A PIANO

MRS. L. W. NOTT, Marion, Iowa.

A PIANO

D. L. FREEBORN, Knoxville, Pa.

A Piano for Illinois. An Elegant Piano for a Dollar! That is what I got and anybody that thinks your prizes are not awarded fairly don't know. There can be no favorites or I would not have won. MIRA E. FURSMAY, Panola, Ill.

A Piano for Pennsylvania. Easiest way I ever saw to get a piano and you people are surely fair. Friends laughed at me and said friends received the prizes. Now they are sorry they did not enter. Will never be without your paper D. L. FREEBORN, Knoxville, Pa.

He Won a Piano. Refer people to me if they want to know whether you are honest. I got a piano for a prize and never heard of you until I answered your ad. Your paper is worth twice the subscription price. W. C. ELLIOTT, Audubon, Ia.

$100.00 Prize. I got my $100 and it was the easiest I ever earned. The dots are hard to count but I know the prizes go to those who win them fairly. AMY R. BARNES, Van Horne, Ia.

Won $350 Cash. To Whom It May Concern: I won grand prize of $350.00 Cash in last contest. I was much surprised. I want to vouch as to Successful Farming's fairness to any and everybody. JOHN A. GOODWIN, Akron, Ohio.

A PIANO

W. O. ELLIOTT, Audubon, Ia.

$100.00 CASH

AMY R. BARNES, Van Horne, Ia.

$50.00 for Canada. Way up here in Canada I won $50. Never knew there was such a paper until I answered ad, Now I will never be without it again. MISS E. FOURNIER, Matane, Quebec.

$50.00 NEWTON RARICK, Ligonier, Indiana.

Others Who Won: $100—Eva I. Buckner Fredonia, Kan. $25.00—Clara Albers, 1209, Wal , Cincinnati, O. $100.00—C. S. Wyman, Vinton, Ia. $50.00—S. Irving Stoyer, 225 E. Balt., Baltimore, Md. $100.00—E. M. Hall, Montrose, Mo. $25.00

$50.00 CASH

EUGENIE FOURNIER, Matane, Quebec.

$50.00 CASH

NEWTON RARICK, Ligonier, Ind.

Nobody connected with our paper will be allowed to compete. Contest closes April 30, but get your counts in at once. See about time prize above. Anybody having three counts entered may enter additional counts at 25 cents each. Be careful to give your plan of counting, as the best plan used will decide all ties.

Address all letters to FARMERS' TRIBUNE, SIOUX CITY, IOWA.

my children established certain routes where they peddled the honey, and in a little while it took them about a week to supply their customers who bought readily and regularly. In this way I might have sold much more

The same year I offered to sell a merchant some at 2 pounds for 25 cents, and he replied that he could sell me some at 7 cents a pound. I asked him how he could do that, and he said, "Oh, don't believe that it is real honey; it's glucose". I really believe that merchants believe in honey very little.

Can any experienced bee-keeper tell me whether or not it would be wise for a man getting an average of $15 a week to discontinue his work and go to bee-keeping in the the vicinity of Chicago? G. H. Kienzle.

Kane Co., Ill., Feb. 13.

Bees Stored Little Surplus Honey.

My 67 colonies of bees did not do very well last season. They gave only 700 pounds of surplus honey against 3500 the year before. Moving from Alabama to Mississippi I think is the cause, together with the season not being favorable.

The worst of the winter weather is now upon us. Last year at this time the bees were gathering pollen freely from elms, alders and maples.

I enjoy reading the reports of the subscribers, and hope each will report his ups and downs. R. V. Goss.

Monroe Co., Miss., Feb. 8.

Bees Did Very Well.

My bees did well last year. I wintered them on the summer stands, losing one colony. I increased from 10 last spring to 20, and secured 1284 pounds of surplus honey,

I Will Teach You the

Chicken Business

WITHOUT CHARGE

and guarantee you success if you use

MODEL

Incubators and Brooders

Send for Descriptive Catalogue.

CHAS. A. CYPHERS

3926 Henry St. BUFFALO, N.Y.

Please mention Bee Journal when writing.

The Fruit of the Vine.—Autumn seems a long way off when snows of winter have scarcely gone. But the agriculturist must be a man who looks far ahead and lays his plans for the future. Summer will be well on the wane before the purple clusters of grapes hang in juicy lusciousness on the vines. It is then that most people will be thinking about grapes. But the grape-grower has to be thinking about what the harvest will be long, long before—several years before, in fact, for it takes time to develop a good vineyard. Mr. Louis Roesch, of Fredonia, N. Y., makes a specialty of fine grape-vines—he has over 800,000 of them for sale, including some 69 different varieties besides trees and small fruits. Any one intending to set out vines or small fruits may obtain a descriptive price-list free by addressing Mr. Roesch, who is a specialist in this line. Send for his catalog, and mention the American Bee Journal when writing.

THIS LIGHTNING **Lice Killing Machine**

kills all lice and mites. No injury to birds or feathers. Handles any fowl, smallest chick to largest gobbler. Made in three sizes. Pays for itself first season. Also *Lightning Lice Killing Powder, Poultry Bits, Lice Murder, etc.* We secure special low express rates. Catalog sent free. Write for it.

CHARLES SCHILD CO.
401 Detroit St., Cleveland, Ohio

Please mention Bee Journal when writing.

BEE-SUPPLIES

Lewis' Goods at Factory Prices

Best shipping-point in United States.

Special Inducements on Bee-Hives. 88-page Catalog—good information for all bee-keepers—free.

ASK ABOUT OUR FREE POCKET-MIRRORS.

C. M. SCOTT & CO., 1001 E. Wash St. Indianapolis, Ind.

Please mention Bee Journal when writing

Important to You

And Complimentary to Us

Is the fact that, after 20 years in the SUPPLY BUSINESS, the last year shows an increase of 33 percent over any previous year.
Is there any better proof than this, that we satisfy and please our customers?
We have the facilities, the experience, and just the kind of goods you want.
They are the ROOT GOODS, and we sell them at Des Moines at Factory Prices.
Write for estimate and discounts. We can save you money. Send to-day for 1905 catalog.

JOSEPH NYSEWANDER Iowa Phone 968 565 & 567 W. 7th St. **Des Moines, Iowa**

8 ÷ 5t—14E5t

Send for Our 1904 Catalog and Price-List.

OUR **HIVES AND SECTIONS**

Are Perfect in Workmanship and Material.

By sending in your order NOW, you will SAVE MONEY, and secure prompt shipment.

We will allow y a cash discount of 3 percent on orders sent in during January.

PAGE & LYON MFG. CO., New London, Wis. U.S.A

"If Goods are wanted Quick, send to Pouder"

BEE-SUPPLIES

Root's Goods at Root's Prices

Everything used by Bee-Keepers.
POUDER'S HONEY-JARS. Prompt Service.
Low Freight Rates. Catalog Free.

One of those nice FLEXIBLE BEE-HATS included free with every shipment, if you will mention it when ordering, telling where you saw the offer.

WALTER S. POUDER,

513-515 Massachusetts Ave., INDIANAPOLIS, IND.

Please Mention the American Bee Journal when writing Advertisers

which was very good for a season following so cold a winter as last winter, leaving them weak in the spring.

Bees appear to be in good condition so far this winter.

I wish great success to the American Bee Journal, as it will bring success to those who study its pages. Wm. Z. Ruggles.

St. Joseph Co., Mich., Feb. 7.

Bees Seem to Be Wintering Well.

We look for a good honey crop the coming season, as we have had lots of snow and the clover has been protected all winter. I have 70 colonies of bees in the cellar, and they seem to be doing well. We usually put our bees out about March 20, if the weather is nice.

I think a good deal of the "old reliable" American Bee Journal, and have it filed away for 5 years. C. M. Lawrence.

Blackhawk Co., Iowa, Feb. 28.

Other Side of Bee-Keeping—Non-Swarming Bees.

I have read many letters in the American Bee Journal from beginners, telling of great success with bees, so much so that I am afraid some of the uninitiated might get it into their heads that all they have to do is to get a few colonies of bees and grow rich, and

STANDARD

Poultry AND....

Bee SUPPLIES

The best of everything for the poultry and bee-keeper.

Freight Rates from TOLEDO are the Lowest

BIG DISCOUNTS FOR EARLY ORDERS.

Our 60-page Illustrated Catalog is out. Send for one. IT'S FREE.

GRIGGS ✣ BROS.

521 Monroe Street,

TOLEDO, - OHIO.

A Flourishing Enterprise.—A business career of 19 successful years is something any firm may look back upon with pardonable pride. And when to the achievements of the past is added the more progressive methods of the present, the outlook for the future assumes a most promising prospect. The proprietor of "The German Nurseries", Mr. Carl Sonderegger, of Beatrice, Nebr., may reasonably expect a continuation and steady growth of the patronage which has enabled him to not only carry on a successful business, but so to increase his facilities as to be able to handle a much larger trade than heretofore. Mr. Sonderegger believes that "value received" merits fair compensation, and that it is better to build the reputation of his nurseries on the integrity of his stock rather than the amount offered at a certain price. Consequently, his 1905 catalog contains no offers of cheap seeds to equalize the quality and price. His guarantee goes with his stock, and every precaution is taken to insure arrival at destination in perfect condition. Send for his catalog, and please mention the American Bee Journal when writing.

SALZER'S SEEDS Never Fail

600,000 planters scattered the world over are willing to say under oath that Salzer's Earliest Vegetables are from six to twenty days earlier than the earliest of their kind produced from other seedsmen's seeds. Why? Because for more than one-third of a century Salzer's Seeds have been bred up to earliness.

For 35c
1 big pkg. Salzer's Scorcher Pea 10c
1 " " Early Bird Radish 10c
1 " " Salzer's Earliest Lettuce 10c
1 " " Earliest Cucumber 10c
1 " " Earliest Beans 10c
1 " " 4th of July Sweet Corn 10c
(Six days earlier than Peep O'Day)
1 " " Six Weeks Verbena 15c
Total 75c

Above seven packages of earliest vegetable and flower novelties positively have no equal on earth for earliness. If you wish the earliest, finest vegetables for your home garden or for the market, Salzer's seeds will produce them every time. We mail you above seven big packages, together with our great plant and seed catalogue for 35c Stamps.

FOR 16c. POSTPAID

We mail to you our big catalogue with sufficient seed of cabbage, celery, lettuce, onions, radishes and turnips to grow 9000 luscious vegetables and a package containing 1000 kernels of beautiful flower seeds besides!

JOHN A. SALZER SEED CO., La Crosse, Wis.

Please mention Bee Journal when writing.

Dittmer's Foundation is the Best.

Send for Catalog, Samples and Discounts, and judge for yourself. 1904 output, 50 percent increase over 1903.

Full line of SUPPLIES, wholesale and retail.

Working Wax into Foundation for Cash a Specialty.
E. Grainger & Co., Toronto, Ont., Sole Agents in Canada for Dittmer's Foundation.

GUS DITTMER, Augusta, Wis.

GOOD DISCOUNTS ON EARLY ORDERS

COMPLETE STOCK OF BEE SUPPLIES--LEWIS CO.'S AT FACTORY PRICES

MUTH SPECIAL HIVE THE BEST DOVE TAIL MADE
SEND FOR CATALOG.

WE ARE ALWAYS IN THE MARKET TO BUY HONEY--SUBMIT PRICE.

THE FRED W. MUTH CO.

51 WALNUT STREET, CINCINNATI, OHIO.

Wisconsin Basswood Sections

And Prompt Shipments

Is what we are making for our customers.

— DOVETAILED HIVES AND SHIPPING-CASES —

We carry a full line of SUPPLIES. Ask for Catalog.

THE MARSHFIELD MANUFACTURING CO., Marshfield, Wis.

87½ Percent Saved

In mortality to those insured in the

TOTAL ABSTINENCE DEPARTMENT

OF

Security Mutual Life Insurance Company

Each Policy Holder is entitled to a Bond issued by the National Total Abstinence League.

YOU may hold a policy and BOND.

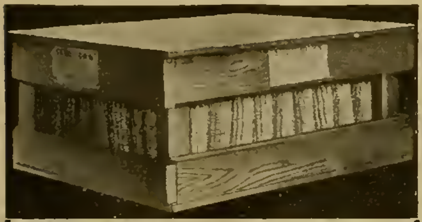
General and special agents wanted. Address,

3D28t A. S. RENNIE, Mgr., 614 Marquette Bldg., Chicago, Ill.

that, too, without much labor. I have had men tell me (of course men who knew nothing about the business) that there was more money in bees than in anything else. One object in writing this letter is to show that there are two sides to bee-keeping as well as all other things, and another is to answer Dr. Miller's question on page 8, as to how I kept my bees from swarming.

In the spring of 1902 I purchased 2 colonies from a neighbor, and he gave me another which he had in a nail-keg. He said he had never gotten any honey from the nail keg, but had lots of swarms. I bought 5 dovetailed hives, set them up, put in foundation and made ready for the first swarms that might issue. At this time I was living in Eagle Co., Colo., and as I was away from home a great deal, and fearing the bees would swarm in my absence, I divided the strongest colony and bought a queen for the queenless portion. The nail-keg colony became so strong that a great many bees had to sleep outdoors at night, and in the daytime they hung out in a great cluster. But *nary a swarm* did they cast.

On Aug. 18 I removed to California, afterwards selling my bees and hives. In April, 1903, in partnership with another man, I purchased 59 colonies. These bees had to be moved 12 miles, and though handled by an old bee keeper (I being absent at the time), they were loaded into lumber wagons without any cushions, and without any ventilation except a wire-screen over the $\frac{3}{8}$x12 entrance, and trotted over rough roads, and the result



SHENANDOAH YELLOW

The corn that has made Shenandoah famous. Has outyielded all other varieties of yellow corn wherever tested. A deep grained 100 day yellow corn, ripe in September Will outyield, outshell, and outsell any yellow corn you ever grew. The world's husking record, 201 bu. in ten hours, was made in this corn near Shenandoah, Dec. 8, 1903. Send for free catalog, photographs and samples of this and other varieties of corn. $5.00 worth of seeds free on club orders. Ask about it.

HENRY FIELD, SEEDSMAN, BOX 50 , SHENANDOAH, IOWA
THE EAR SEED CORN MAN

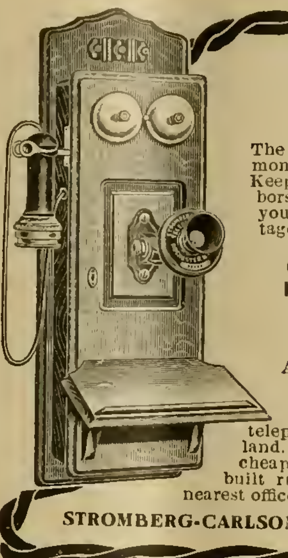
Please mention Bee Journal when writing

March 1st to April 15th
2 percent Discount.

Dovetailed Hives from Michigan White Pine, $1.25 each, 1½-story for comb honey. Address,

The Wood Bee-Hive and Box Co.
10Atf LANSING, MICH.

It's a Pleasure to Plant.—There's a genuine fascination about planting and digging around the garden, in plowing and planting a field; besides, it's a healthy, profitable out-of-doors pastime to raise a garden. You can get nearer to Nature in the garden and the field than anywhere else on earth. To plow and plant—to see the tender sprouts shoot above the soil, and to watch them grow and develop—what grander way to study Nature than this occupation affords? What is more beautiful than the neat, clean rows of growing garden-truck or the waving grain of the field? What more pleasant than the table loaded down with the green things you raised yourself? What more disappointing than the garden that refuses to grow? To be certain that your garden shall be a success, and the yield of your field profitable, you must look well to your soil and your seed. W. W. Barnard & Co., 161 & 163 E. Kinzie St., Chicago, Ill., will be pleased to help you; they will send *free* their 1905 *Annual Seed Catalog*, which will put you right as to the best seed for you to plant to insure success in your garden and on your farm. Write for the book to-day, and please mention the American Bee Journal.



A Telephone for the Country Home

The telephone in the country home is not a luxury—it's a money-saving investment that brings returns every day. Keeps the farmer's family in close relation with the neighbors, saves many a trip to town, and helps to make the young folks satisfied with the farm by giving them advantages like their city cousins.

Stromberg-Carlson Telephones

Are the right telephones for country homes. They work right, *stay right*, and the price is right. Our Book F- 80 "*Telephone Facts for Farmers*"—gives complete information on how to organize, build, equip and maintain a telephone line. Farmers are building lines all over the land. *Why not you?* Write for the book and see how cheaply it can be done. Our book 80 tells how others have built rural telephone systems. Both books are *free*. Address nearest office *today*.

STROMBERG-CARLSON TEL. MFG. CO., Rochester, N. Y., Chicago, Ill.

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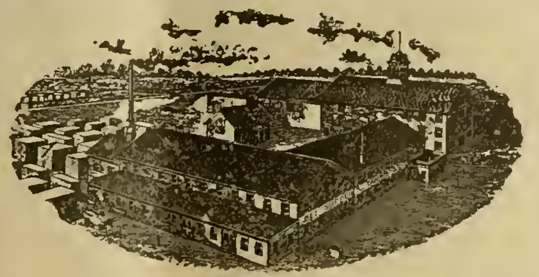

Bee-Supplies!
Discount for Early Orders

We carry a large stock and greatest variety of everything needed in the Apiary, assuring BEST goods at the LOWEST prices, and prompt shipments. We want every bee-keeper to have our FREE ILLUSTRATED CATALOG, and read description of Alternating Hives, Massie Hives, etc. WRITE AT ONCE FOR CATALOG

AGENCIES.—Trester Supply Co., Lincoln, Neb.; Shugart & Ouren, Council Bluffs, Iowa; Fulton & Ford, Garden City, Kan.; I. H Myers, Lamar, Colo.; Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex. **KRETCHMER MFG. CO., Red Oak, Iowa.**

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We are...... Manufacturers of **Bee-Keepers' Supplies**

Lowest Prices and Highest Quality. Our New Catalog just out. Write for it. Compare prices with others. 15 years' experience. Not in the Combination. Modern Machinery. Sections and Shipping-Cases by the car-load. Prompt shipments. Hives, Extractors, Feeders, and all Supplies used by bee-keepers. All goods guaranteed as per Catalog.

MONDENG MFG. CO.,
147 and 149 Cedar Lake Road, MINNEAPOLIS, MINN.

7Dtf

Please mention Bee Journal when writing.

was something awful. Five of the strongest were killed outright, and about half of the others were damaged so badly it took them all summer to build up into fair-sized colonies.

The honey crop in this part of the country that year was a light one, but we got about 1200 pounds of extracted, and not a single swarm. I forgot to say that I had in the meantime purchased "A B C of Bee Culture" and subscribed for the American Bee Journal, and I expect to get more bee-literature later on. During this season the bees were run by the old bee-keeper who moved them, while I worked at my trade.

In the fall I purchased my partner's interest, and also bought 13 more colonies from another man, and in the spring of 1904 moved them to a location 6 miles away. This time I had charge of the moving myself, and did not break a single comb.

The honey crop for 1904 was a complete failure. I got only about 75 pounds of comb and 75 pounds of extracted, and in the fall I had to feed about $15 worth of sugar, but, as usual, I did not have any swarms. I have done nothing to keep them from swarming unless I did it without knowing it, for I *wanted* them to swarm, so the only way I can answer Dr. Miller is in his own language, "I don't know".

I did not go into the bee-business expecting to make "easy money", but I made up my mind some years ago I would like to follow it, and though it has been a failure financially so far, I am more enthusiastic over the business now than ever. The nearest I can size things up in this part of the country, after a two years' residence here, is as follows: We can depend upon a heavy honey-flow once in 5 years and one failure in that time, and the other 3 years will be ordinary or light crops, and if a man gets an average of 75 pounds per colony per year he is doing well.

I am gradually learning the business as I go along, and if I should get "fired", or get too old to run a locomotive, I hope to be able to make a living keeping bees.

I think the prospects for this year are good. We have had about 10 inches of rain, and it is raining to-day. I expect to try my hand at brood-rearing this year, and make some artificial increase, as I seem to have a strain of non-swarming bees, and I must do something to make up for winter losses.

This is my first letter, and it is rather lengthy, but a man is usually forgiven for the first offense, so I hope to be in this case.

J. W. KALFUS.

San Luis Obispo Co., Calif., Feb. 1.

INTRODUCED IN 1905

OLDS' WHITE VICTOR
L.L.OLDS'SEED CO.

Strongest in Vitality
Handsomest in Appearance. Most Desirable in Shape and Size. Best all the Year Round Potato

Other 1905 leaders are Vt. Gold Coin, Ey. Roser, Vornehm, Noroton Beauty, Red River Ohio and Acme, Pat's Choice, Sir Wal. Ral., etc. We are headquarters for seeds. Largest stock, lowest prices. Our Potatoes and Seeds awarded Gold Medal at St Louis. 80-page Catalog free.

L. L. Olds Seed Co., Drawer G, Clinton, Wis.

Sweet Clover Seed
—FOR SALE—
50 lbs. or over, at 5 cents per pound. Address,
5A9t **JOSEPH SHAW, Strong City, Kans.**

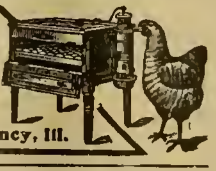
The ORMAS Incubators & Brooders
Low in price. Fully guaranteed.
Send for free catalogue.
BANTA MFG. CO., LIGONIER, INDIANA.

Send for Free Catalog

Wanted Man 20 to 30 years old capable of taking charge of an apiary of 200 colonies. Can give employment balance of year collecting and soliciting for lumber and coal. In answering give reference and salary expected. **TRESTER SUPPLY CO. LINCOLN NEB**
6Atf Please mention the Bee Journal.

GREENING'S STEAM DUG TREES
AGENTS WANTED
STEADY EMPLOYMENT, GOOD PAY.
ELEGANT OUTFIT FURNISHED. WRITE FOR TERMS. BEAUTIFUL COPYRIGHTED CATALOGUE
700 ACRES
THE GREENING BROS. NURSERY Co.
BOX [illegible] MONROE MICH

Fruitful Trees High in Quality Low in Price
Millions of Fruit and Forest Trees, Apples, Peaches, Cherries, Grapes and Strawberries, R. Mulberry and Black Locust Seedlings at special prices. Freight prepaid on $10 orders. Guaranteed to reach you fresh and bright. Don't miss our free catalogue.
GAGE COUNTY NURSERIES
Box 646 Beatrice, Neb.

$12.80 For 200 Egg INCUBATOR
Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day
GEO. H. STAHL, Quincy, Ill.


450,000 TREES
200 varieties. Also Grapes, Small Fruits etc. Best rooted stock. Genuine, cheap. 2 sample currants mailed for 10c. Desc. price list free. **Lewis Roesch, Fredonia, N.Y.**
Please mention Bee Journal when writing.

Bee-Keepers' Supplies.
Send for Catalog.
Leahy Mfg. Co., East St. Louis, Ills.
2A16t Please mention the Bee Journal.

LOWEST RATES EAST
are afforded via the Nickel Plate Road. With solid through trains to New York City and intermediate points, via both Lackawanna and West Shore Roads, and to Boston and other New England points, via the Nickel Plate and West Shore and Boston & Maine Roads, travelers via that popular low rate line are offered all modern conveniences. Excellent Dining Car Service, meals being served in Nickel Plate dining cars on American Club Meal Plan, ranging in price from 35c to $1.00. No excess fare charged on any train on the Nickel Plate Road. Chicago depot, Van Buren and La Salle Sts., the only railroad station in Chicago on the Elevated Railroad Loop. City Ticket Office, 111 Adams St. 'Phone Central 2057.
1—11A5t

The Rietsche Press
Made of artificial stone. Practically indestructible, and giving entirely satisfactory results. Comb foundation made easily and quickly at less than half the cost of buying from the dealers. Price of Press, $1.50—cash with order. Address,
ADRIAN GETAZ,
44At KNOXVILLE, TENN.

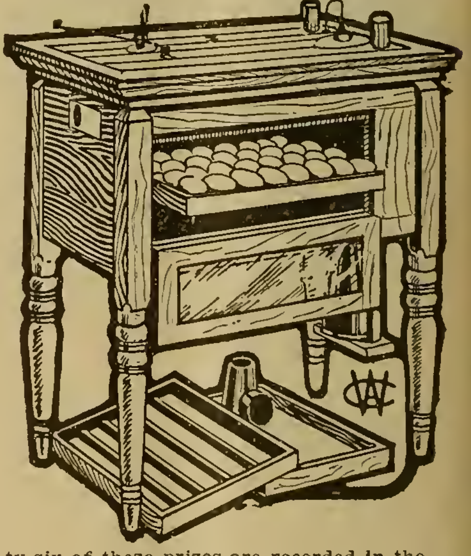
10 CENTS A YEAR.
The Dixie Home MAGAZINE, largest, brightest and finest ILLUSTRATED MAGAZINE in the world for 10c a year, to introduce it ONLY.
It is bright and up-to-date. Tells all about Southern Home Life. It is full of fine engravings of grand scenery, buildings and famous people. Send at once. 10c a year, postpaid, anywhere in the U.S., Canada and Mexico. Six years, 50c. Or, clubs of 6 names, 50c; 12 for $1. Send us a club. Money back if not delighted. Stamps taken. Cut this out. Send to-day. **THE DIXIE HOME,**
24A48t **No. 75. Birmingham, Alabama.**

The Incubator an Educator.

Looking at the history of artificial incubation in America from a critical standpoint the name "Prairie State Incubator" stands identified intimately with its successive stages of progress.

Any man, woman or child can apply the plain directions in the Prairie State book of directions and with a Prairie State Incubator and Brooder any farmer, villager, suburbanite or commercial poultryman can make money every day.

The Prairie State has been a winner "from the start." From 1886, when Mr. Mix first put his incubator on the market and won the first prize at the great St. Louis show, to the present date, the Prairie State has been forging ahead—a steady winner. Three hundred and twenty-six of these prizes are recorded in the new catalogue with dates. The majority of these were not won by trained operators trained for the purpose, but by local poultry-raisers. Some were farmers' wives—genuine poultry enthusiasts; some were storekeepers—some farmers. These enthusiastic people take their own machines in their own wagons. The Prairie State had fulfilled all their anticipations. It had not disappointed them. Consequently they were proud of their ability to select a machine that hatched 85, 90 and 95 per cent of the fertile eggs. Naturally they wanted to exhibit the machine.



The Prairie State Catalogue is a library of information on every point for the education of beginners or experts in poultry raising. Any one can get one free from the Prairie State Incubator Company, Homer City, Pa.

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CONVENTION NOTICES.

Illinois.—The Western Illinois Bee-Keepers' Association will hold its spring meeting April 5, in the County Court Room, in Galesburg. Seasonable subjects will be discussed. Each meeting so far has been more interesting than the previous one, and we hope to continue that way. We earnestly invite all who are interested in this industry who are within easy reach of Galesburg, to be at this meeting.

E. D. Woods, Sec.

Michigan.—The Northern Michigan Bee-Keepers' Association will meet in Lady Maccabees Hall, at Central Lake, Wednesday and Thursday, April 5 and 6, 1905. Hotel rates will be, The Tavern, $1.50 per day. Editors A. I. Root and W. Z. Hutchinson will be present; also E. D. Townsend, Geo. E. Hilton and a number of other practical apiarists of Northern Michigan If you have never attended a convention let us suggest that you try it for once, and you will have a higher opinion of your calling when you leave. W. Mohrmann, Sec.

Geo. H. Kirkpatrick, Pres.

Utah.—The Utah Bee-Keepers' Association will hold its spring convention in the Mayor's Office, City and County Building, April 7, at 10 a.m. All are invited. Matters of great interest to bee-keepers, and horticulturists will be considered. Cache Valley's experience of killing the bees by poison spraying in the bloom must not be repeated. Jot down your thoughts on this or any other question, and bring or mail the same. G. E. Garrett, Sec.

E. S. Lovesy, Pres.

HONEY AND BEESWAX

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At Root's Factory Prices

C. H. W. WEBER CINCINNATI ...OHIO...
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Honey and Beeswax

Chicago, March 8.—There has been somewhat of an increase in the number of sales during the past 4 weeks, yet the volume has not been large, while prices are if anything lower than in January, especially on other grades than white clover. Fancy grades of white comb bring 12½@13c; No.1, 12c, with some off in color at 11@11½ cents; amber grades slow at 8@10c. Extracted, white, 6@7c; amber, 5½@6½c; the price being governed by quality, flavor and package. Beeswax, if clean and good color, 30c per pound. R. A. Burnett & Co.

New York, March 11.—There is no improvement in the comb honey situation. The demand is next to nothing; quotations nominal and no doubt some of the stock will have to be carried over. We quote fancy at 13c; No. 1 at from 11@12c, and dark at from 9@10c. Extracted is in fair demand: White at from 6@6½c; light amber at 5½c; Southern in barrels from 50@57c per gallon, according to quality. Beeswax firm at 29c. Hildreth & Segelken.

Boston, March 9.—The demand for comb honey still continues light with heavy stocks on hand. Fancy white, 15@16c; No. 1, 14c. Extracted, 6@8c. according to quality.

Blake, Scott & Lee.

Kansas City, Feb. 25.—The honey market is still very lax, with scarcely any movement at all; the best white comb stock, 24 section cases, is selling here at $2.25 per case. Extracted moving all the way from 4½@6½c per pound, according to quality. We look for an improvement. Beeswax in good demand at 28c.

C. C. Clemons & Co.

Cincinnati, O., March 8.—The comb honey market has been a drag the last month; this caused the holders to offer extra inducements in prices. Quotations obtained are as follows: No. 1 fancy water-white comb, 12@13c; No. 2, 10½@11½c. Extracted: white clover in barrels, 6½c; in cans, 7½@8 cents; amber, in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c.

C. H. W. Weber

Philadelphia, Feb. 20.—On account of the very bad weather the sales among the retail trade in honey have been slow. Quite a good many shipments have been arriving from distant points and the market at the present time is overstocked. We quote: Fancy white comb, 15@16c; No. 1, 13@14c; amber, 12c. Extracted, white, 6½@7c; amber, 6c. Beeswax, 27c.

We are producers of honey and do not handle on commission. Wm. A. Selser.

Albany, N.Y., Feb. 8.—Honey market dull this extreme cold weather, especially comb, which candies or granulates and cracks easily. We quote: Fancy white, 13@14c; No. 1, 12@13c; mixed, 10@11c; buckwheat, 10@11c. Extracted, better demand: Buckwheat, 6@6½c; white, 6@6½c. Buckwheat most in demand, as the Jewish people will have no other. Beeswax, 30@32c. H. R. Wright.

San Francisco, Feb. 28.—White comb, 1-lb. sections, 11@12 cents; amber, 8@10c. Extracted, white, 6@6½ cents; light amber, 4½@5½c; amber, 3¾@4¼c; dark amber, 3@3½c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

A shipment of 200 cases extracted went forward per steamer for Germany the past week. Several small lots were taken for the Orient. Business on local account is light. Prices are without quotable change, but market is easy in tone.

Cincinnati, March 10—There is little, if any, improvement in the honey market here, since our last quotation. We hope to render a more encouraging report soon. We quote amber extracted honey in barrels and cans at 5½@6½c. White clover at 7@8c. Fancy white comb at 12@13c. Beeswax, 28c.

The Fred W. Muth Co.

Langstroth on the Honey-Bee

Revised by Dadant—Latest Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.20, or club it with the American Bee Journal for one year—both for $2.00; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

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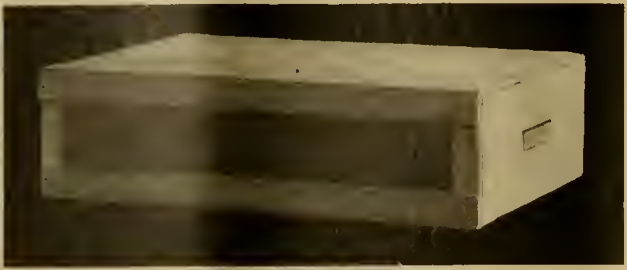

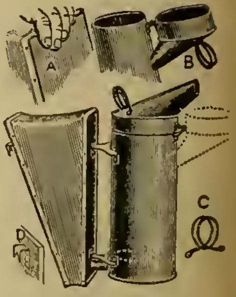

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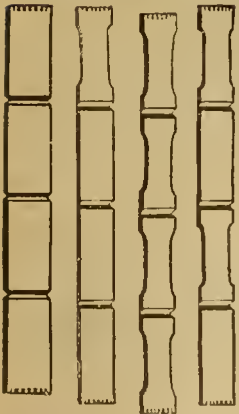

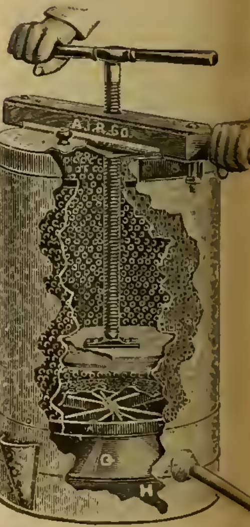

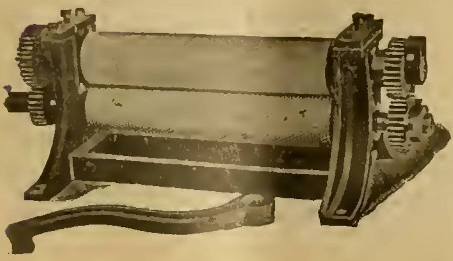

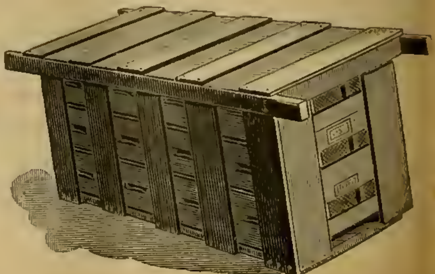

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American Bee Journal

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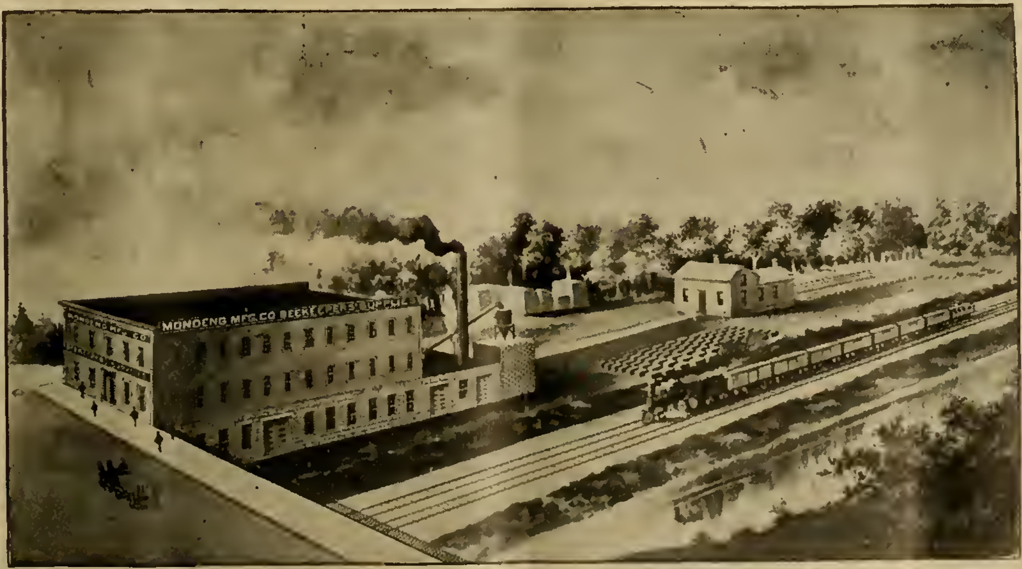
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For the saving of freight for our western trade, as well as to give much quicker delivery, we opened a branch office in Chicago, Oct. 1, 1903. The following taken from our catalog of last year, explains the transfer then made:

The business for many years conducted by George W. York & Co., at 144 E. Erie Street, as agent for The A. I. Root Company's supplies, is this day transferred to The A. I. Root Company, to be conducted as a branch office. Please note change of name to avoid confusion in our work. THE A. I. ROOT CO.
October 1, 1903.

To Our Customers and Friends:

In transferring back to The A. I. Root Company the bee-supply business, which we took over from them some years ago, we do so with regret, as we have labored hard to build up a large and honorable trade in bee-appliances, and value beyond expression the valuable patronage accorded us during the years. We trust the same will be continued to our successors in the business.

GEORGE W. YORK & Co.
Chicago, Ill., Oct. 1, 1903.

The conveniences offered by the branch office were evidently appreciated by the bee-keepers of Illinois, Wisconsin, and other States beyond, for the business done by the branch was much beyond our expectations. During the rush season—April, May and June—orders came in so fast that, in spite of frequent orders to the factory for another car of goods, the stock ran low, and some delays and annoyances thereby were caused. Some little confusion because of change of name and manner of conducting the business (from agency to branch office), but these have all been overcome. We are better than ever prepared to handle your business carefully and promptly, and solicit your patronage.

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A glance at any railroad map will show the superiority of Chicago as a shipping-point. Because of the great number of railroad and steamboat lines centering in Chicago, and the large stock of goods we carry, we can give you the best of service. This office is in constant touch with the factory and home office, and in many cases can give your order quicker attention and earlier shipment than the factory, to say nothing about the saving in time and transit and lower transportation charges.

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We are prepared to furnish goods at wholesale and retail, the same as the home office.

Terms.

Our terms are cash with the order. We pay cash for material, and pay our helpers cash every week for their work; therefore we must have cash in advance for the goods furnished. Do not ask for credit.

Beeswax Wanted.

We are in the market for good beeswax the entire year, and pay the same prices as quoted by our home office in each issue of GLEANINGS IN BEE CULTURE. Send your wax direct to us for cash or in exchange for supplies.

Extracted Honey.

In the course of a year we use large quantities of extracted honey, and are pleased to get sample and prices from parties who have honey to exchange for supplies. We are also prepared at all times to furnish first-class honey to any one who is in need of same, either bee-keepers who have a demand for more than they can furnish, or from dealers. Get our prices before you place your orders elsewhere.

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You can produce better-looking honey.

QUANTITY
You can produce more of it.

PRICE
You can get more per pound for it.

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GEORGE W. YORK, Editor. CHICAGO, ILL., MARCH 23, 1905. Vol. XLV.—No. 12.

Editorial Notes and Comments

Local Advertising of Honey.

The bee-keeper who wants to get the best there is out of the local market is blind to his own interest if he neglects local advertising. J. E. Johnson says this in the American Bee-Keeper:

> Last year I wrote articles in our home and country papers explaining the value of honey as a food. I then wrote a leaflet, "Facts About Honey and Bees," and had it printed. I put one in every case of honey, and gave copies to people who had not bought honey. I also inclose them in letters.
>
> I sold one case of No. 1 honey to a prominent citizen of our town. I gave a leaflet to his wife when I delivered the honey and put one in the case. To that family I sold last year seven cases of comb honey and one gallon of extracted. They got interested, and he bought two cases to take to a brother 30 miles away. In two or three weeks I got a letter from a lady who had been to visit that brother and sampled that honey. She wanted two cases of that same kind of honey. And so, from that one case and my leaflets, I now have three good customers. This first man has already this year taken five cases, and is going to take four cases to his brother and lady friend.

Shipping Comb Honey to Market.

This is a most important subject to the comb-honey producer, if he ships to the distant market. The Fred W. Muth Co., Cincinnati honey-dealers, have just had an experience that is quite fully explained in the accompanying correspondence. The first letter, dated March 10, is to us, and the second one is from the Muth Company to the customer who shipped them the honey:

> Friend York:—Some time ago, while at your office, you will recollect I spoke to you relative to a shipment of six carriers of comb honey we received, in which a large majority of the frames were broken. We do our utmost to make a friend and customer, and gave this party the very best price we possibly could afford. It might be well to call the attention of your readers to the letter we wrote him, a copy of which we are inclosing herewith.
>
> Yours very truly, The Fred W. Muth Co.,
> *Per* Fred W. Muth, *Pres.*

The following is the copy of letter referred to in the foregoing, the customer's name being omitted, of course:

> *Dear Sir:*—We are inclosing herewith our check in payment for the six carriers of comb honey as per credit statement attached.
>
> Shipments like this we regret to receive, for they are prone to put a damper on future transactions, and still, at the same time, we are not to blame.
>
> This shipment arrived just when we were having the coldest weather of the season, when the thermometer ranged from 10 to 15 degrees below zero. Furthermore, to make matters worse, there were no marks on top of the carriers to warn the railroad company to handle them with care, and only one of the carriers had handles. Judging from the condition in which the honey arrived, the railroad company handled the carriers, presumably as though they were so many trunks. From outward appearances there were apparently no leakages, but upon opening the packages we beheld an awful sight, because we had your interests foremost in our minds.
>
> We want the support of every shipper, but, as it is, we lost money in this transaction, as we did not charge you one cent for the great amount of labor required to overhaul the lot. We interested the vegetable peddlers, who made their own price, for it needed selling, and we were anxious to rid ourselves of it.
>
> At first we removed the combs from the sections, and tried to dispose of it as chunk honey, but learned that the peddlers could sell it best in the frames, the last case or two of which are still on our hands unsold.
>
> As stated before, we did not charge you for the extra labor, for we felt that the price, as it is, will be unsatisfactory to you.
>
> Hereafter, in shipping honey, and especially comb honey, we warn you to be more careful. In the first place, please see to it that each carrier has *two* handles, and mark these words on the tops of the carriers: "Caution, Comb Honey, Handle with Care." And if you will do this, you will find that you will realize a better profit on your crop. If possible ship your honey as early in the season as you can, for after the trade is supplied you can not expect to get as good a price as before.
>
> If you will heed these words of advice, you will profit thereby.
>
> Yours very truly, The Fred W. Muth Co.,
> *Per* Fred W. Muth, *Pres.*

We venture to say that the shipper referred to does not take and read a bee-paper, nor has he read a first-class book on bee-keeping. He doubtless lost enough on that one shipment to buy all the bee-books published in this country, and also enough to pay the annual subscription price of all the bee-papers for 20 years.

We have so often published directions for preparing comb honey for shipment that it seems almost a waste of space to repeat them. But what's the use of spending months in producing comb honey, and then by improper packing for shipping lose half the value of the honey? It pays to read—to learn—how to do things right. It is usually such bee-keepers that say they can't afford to spend a dollar a year for a good bee-paper. Why, they really can't afford to do without the paper that tells them how to prevent such losses.

A little later on we will again publish full directions for preparing comb honey for safe shipment.

Prices of Hives Further Considered.

On page 99 a clipping from The Farmer was inserted and some views regarding it expressed. Mr. E. A. Morgan, a well-known bee-keeper of 30 years' experience, conducts the apicultural department in that periodical, and in a recent letter says:

> "Bee-keepers can not buy hives for less than they can make them, and where is the carpenter or cabinet-maker that can not do as accurate work as any expensive machinery?"

Bee-keepers, as a class, are a very intelligent sort of people, and if they can make hives cheaper than they can buy them, they will be likely to do so, and whenever a majority of them, or even a considerable majority, report that they are making their own hives, the beginner will be advised accordingly in these columns. The question about "the carpenter or cabinet-maker" is referred to the reader.

Mr. Morgan further says: "The supply-dealers' combine *do* take the statement from Washington to raise their prices on supplies, however much you try to cover it up. Your comparison of the wood-chopper and his ax bears no comparison, and does in no way apply in this case."

Not being in the secrets of any "combine," of course we can not dispute any illogical thing attributed thereto, but can see no reason why the wood-chopper and his ax do not apply. If 100 percent profit on investment in one case should affect prices on articles for investment, why should it not in the other?

Then Mr. Morgan says this in his letter on this subject:

But you ask, Is it true that prices have doubled? and ask The Farmer to give a single instance of a case in which any manufactory lists a hive at double the price at which it listed it at any previous time. This is the greatest break in your whole article. Would you please name one single manufactory that *hasn't* doubled prices on supplies, and many have trebled?

I have before me bills paid in 1879, 1880, 1881: 8-frame Langstroth hive, 1½ story, nailed and painted, 75 cents. That was before the day of sections, but eight 5-pound boxes were furnished with glass sides.

In 1889 hives took a drop. I bought, that year, 100 hives, 10-frame, 1½ story, in the flat, at 50 cents. When sections came on the market they were sold at $1.75 per 1000; later on, sandpapered both sides, $2.00 per 1000. This as late as 1897; since that time they have doubled in price.

At the first-mentioned date honey sold in the comb at 25 cents to 30 cents per pound. In 1883 I sold my entire crop at 17 cents, and paid $1.00 each for 10-frame 1½-story hives, and $2.00 per 1000 for sections; and now, when the best comb honey must be sold at 11 to 14 cents, extracted at 7 cents, delivered, they ask $2.45 for an 8-frame 1½-story hive, and $5.00 per 1000 for sections.

Is it any wonder that bee-keepers are going out of the business? I have a list of 51 bee-keepers that have quit the business on this account alone.

Therefore, I say, bee-supplies are unreasonably high, and much higher than prices of lumber would warrant, or the prices of honey can pay for. Look over the many supply-dealers' catalogs and note the stereotyped price-lists; no matter whether in the lumber region or 200 miles away, all are printed from the same type, showing the combine. So I say, bee-keepers, make your own hives or quit the business.

E. A. MORGAN.

However interesting Mr. Morgan's figures may be, are they relevant? The request, as repeated by Mr. Morgan, was for "a single instance of a case in which any manufactory lists a hive at double the price at which it listed it any previous time." That single instance Mr. Morgan *has not given.* It is not said he can not do it, but he has not done it; and his paying double, or five times as much one time as another, does not meet the case. Neither does the intimation that every manufactory has "doubled prices on supplies, and many have trebled" meet the case. Supplies in general, including sections, were not under consideration. A look at the clipping, page 99, will show that Mr. Morgan was advising that bee-keepers could make their own *hives*, and the request was for a *hive* which was listed at a price double the price of a previous year.

But Mr. W. R. Ansell, of Minnesota, comes to the rescue of Mr. Morgan, giving a clear instance that is directly to the point. He has a catalog issued by one of the Wisconsin manufacturing establishments less than ten years ago, in which the 8-frame 1½ story Improved Langstroth-Simplicity hive in the flat, in lots of five, with fixtures enumerated, is quoted at 65 cents each; and the same thing is now quoted at $1.70 each.

It certainly does not seem that an advance of 161 percent over the prices of nine years ago is warranted, and if there is no mistake in the case, there is good ground for considering the question somewhat debatable, whether the beginner shall make or buy his hives. That question may be further considered hereafter.

In the meantime, as the request for a doubling of list prices has not been answered by Mr. Morgan, but by another, there may be nothing unfair in asking him to make good his directly implied statement that prices have been doubled within a year. For he says the statement from Washington last January (presumably January, 1904) caused a doubling in prices. Will he give us a specific instance?

Since the foregoing was written an attempt has been made to compare prices of hives in the catalog of 1896, issued by one of the larger manufactories, with those of 1905 by the same firm. Attempting to compare prices of the same hive, in lots of 10, there is found in one case an advance of 50 percent; in a second case the advance is 64 percent; in a third case, 69 percent. This may not be entirely exact, for it is not easy, in comparing the catalogs, to make sure that one has exactly the same thing in each. In other hives the advance may be more, or it may be less. The comparison is, however, sufficiently reliable, in all probability (and any one can make such comparisons for himself) to warrant a doubt as to a general doubling in the price of hives, to say nothing of the doubling within a year.

Further, we wish to refer briefly here to Mr. Morgan's advice to bee-keepers as given in the last sentence of his letter. If barn lumber should double in price, would he advise the farmer to quit farming or stock-raising? If mowing machines should double in price, we suppose Mr. Morgan would advise farmers to make their own, or quit making hay!

To us it doesn't seem to be so much a question of what bee-supplies cost, as it is what price can be realized for honey. The bee-keeper that can get a net price of say 15 cents a pound for his comb honey, and average 75 to 100 pounds per colony annually, isn't going to object to paying a fair price for hives once in 10 or 20 years. So it appears to us.

We want to say further, however, that we have no use for trusts or combines that are formed for the purpose of raising prices and keeping them raised. And if any bee-keepers can save money by making their own hives and other supplies, they certainly would be very foolish to buy them ready made. *We* do not manufacture or have for sale any hives, so we have nothing whatever to do with fixing the prices at which they are offered for sale. If bee-keepers do not make their own, no doubt all kinds of hives can be bought in the market at all kinds of prices. If buying, "You pays your money and you takes your choice," as our German friend would say.

Treatment of Chilled Bees.

Whether you believe that a colony of bees freezes to death or starves to death makes little practical difference, but it is of much practical importance for every beginner to know that a colony with stores exhausted and apparently dead is not always beyond recovery; indeed never, if taken in time. If you find a colony apparently dead, without knowing how long it has remained in that condition, don't give it up for lost, but at least give it a chance. If it has only recently succumbed, and if the day be warm, it may be necessary only to sprinkle on the cluster a little diluted honey or syrup to bring it back to life. If the day be cold, take the colony into a warm room, and warm it up. In any case it will be better to take the bees into a warm room. Watch for signs of life before giving any food. Don't be in a hurry; it may sometimes be an hour before you see the bees begin to move, but if they haven't been too long motionless you may be sure that after a little you will see a leg begin to move here and there, and as soon as they move they are ready for a lunch. Many a good colony may thus be saved.

Miscellaneous News ✣ Items

To Minnesota Bee-Keepers.—Mr. Wm. Russell, an officer of the Minnesota Bee-Keepers' Association, informs us that the Association's Foul Brood Bill (House Bill No. 563) has been introduced and referred to the Committee on General Legislation. Minnesota bee-keepers are urgently requested to write their senators and representatives in St. Paul *at once*, asking them to be sure to support the Bill when it comes up either in the House or Senate.

* * *

Rev. Dr. John Dzierzon, the "Father of German Bee-Keeping," is thus referred to in a late number of the British Bee Journal:

> On Jan. 16 this venerable bee-keeper entered upon his 95 year, having been born in 1811. He has been a bee-keeper for 70 years, and has a world-wide reputation for his work in advancing apiculture. The principal scientific discovery of his was parthenogenesis—that is, reproduction without fecundation. This was known to exist in other insects in the first half of the 18th century, but it was in 1835 that Dr. Dzierzon commenced to think about it, and in 1842 to 1844 he made known his ideas in Frauendorfer Blaetter. In 1845 he published his discovery in the Bienenzeitung, and this drew the attention of scientists to the subject. "The Dzierzon Theory," as this was called, was subjected to the most searching investigation by Siebold, Leuckart, and others, and, although still denied by some, is generally accepted as true. The Allgemeine Zeitung fur Bienenzucht prints some very pretty verses dedicated to this veteran, and also gives extracts from papers eulogizing him at the time of his bee-keeping jubilee 20 years ago, and mentions the honors conferred upon him. We are sorry to hear that Dr. Dzierzon is at present unwell, and he has our best wishes for his recovery.

* * *

The Mondeng Mfg. Co.—This company is represented on the first page. The members of the firm are Messrs. Chas. Mondeng, J. W. Hare, and L. H. Burke.

Their new factory is located opposite Bryn Mawr Park, in Minneapolis, and affords a beautiful view. It is surrounded by natural woods, and running creeks make it a very picturesque site.

Though practically a new one, their factory is fitted up with the latest improved machinery, and is equipped to compete with the best. Their prospects for a good future are very encouraging.

Mr. Mondeng is a practical bee-man, and has an apiary adjoining the factory; having also been in the bee-supply manufacturing business for many years, he looks after the mechanical part of the work, and personally superintends it. Being a thorough bee-man and also a practical mechanic, he understands the business from beginning to end.

Mr. Hare personally superintends the shipping and receiving, having had considerable experience in a mercantile way. He has been in the general store business for a number of years, and is a very valuable man in his department.

Mr. Burke, who has been a book-keeper for years, looks after the office-work, and is constantly busy keeping in touch with many bee-keepers throughout the country.

The foregoing trio in charge of the different departments, and working together, should soon place the Mondeng Mfg. Co. in the forefront of the manufacturers of bee-keepers' supplies.

We had the pleasure of visiting this Company when attending the Minnesota State convention last December, and were very favorably impressed with the members composing the firm. They were evidently preparing to get their share of the bee-supply business, and certainly should be in a position, so far as ability and equipment is concerned, to handle satisfactorily all that comes their way. We wish them success.

The Apiary of Walter Hoss, of Marion Co., Ind., is shown on the first page. The picture represents only a part of his apiary. There are 45 colonies in the yard, which is located on the rear lawn of his beautiful home. The hives are kept nicely painted, the combs are all straight as a board, and every colony is bred up to highest standard of Italian purity.

Mr. Hoss produces both comb and extracted honey, and has a local demand for every pound—in fact, he does not have enough to go around. He is engaged in other business, but his bees are never neglected. In his work he is assisted by his good wife. His facilities for queen-rearing, with the present encouraging demand, indicate that he will some of these days devote his entire time to that line of apiarian work.

Contributed Special Articles

Comparative Cost of Honey, and Light-Weight Sections, Causes of Small Demand.

BY L. V. RICKETTS.

THE question of increasing the demand for honey and its consumption is one that is frequently brought up for discussion at bee-keepers' conventions and in the American Bee Journal. Among the latest being an editorial on page 19, the Editor asks:

"Why is not more honey used by the ordinary families of to-day? What can be done by the bee-keepers to induce them to use it more than they do?"

These are questions which deserve the most sincere thought and careful consideration of all honey-producers. What I shall say on them will apply principally to section honey.

From July 1, 1886, to April 2, 1896, I was engaged in the retail grocery business; and during those (nearly) 10 years I had considerable experience in selling section honey, which, together with some recent observations that I will now give, lead me to believe that the principal reasons for the ordinary families not using more honey are: Because of the price being greater than for many other sweets (which it should be); and particularly because of the swindle that is being perpetrated on the consumer by the selling of light-weight section honey. Now as to my observations:

While in the retail business it sometimes happened that the case of honey would be placed on the counter within reach of my customers, and they would frequently select a section of honey that seemed to suit their fancy best—and you may rest assured that the best-filled and heaviest sections would be the first to go; these would generally find quite a ready sale, but the lighter weight and poorly-filled ones would move off very slowly, there being quite a difference between the weights of the heaviest and the lightest in the same case.

My recent observations are, that, during the last year, I have at various times gone into the retail stores and bought a section of honey and then weighed it, to find its exact weight. This I found to vary from 12 ounces for the lightest to 16 ounces for the heaviest, giving an average of 14⅜ ounces each, for 12 sections purchased at as many different times and at different stores. The sections thus bought were of different sizes, some were 4¼x4¼x1⅞, some 4¼x4¼x1⅝, and others 4x5x1½ inches. Among the 12 there was but one that weighed as light as 12 ounces; this was a 4¼x4¼x1⅝ section; and only one that weighed 16 ounces—this was a 4¼x4¼x1⅞ section. All the square sections were bee-way sections, and the 4x5 sections were plain. All excepting the one weighing 16 ounces seemed to have been used with separators while being filled. The retail price is 20 cents per section the year around at the stores here, and for all grades and weights.

As before stated, I have come to the conclusion that it is owing to the greater price asked for honey than for other and inferior sweets, together with the selling of light-weight section honey that keep the common people from buying and using more honey, and not because they don't understand the food value of it, or have not acquired a taste for it.

It is folly to say that there is more honey produced than the people wish to consume. The great mass of customers know that when they buy a section of honey they should get a full pound of honey, yet they know full well that they don't get that amount in the great majority of cases. Therefore, they are dissatisfied with their purchase, no matter what the price paid, so they frequently look for some substitute for honey that is being sold cheaper, with better weight or measure.

The remedy for this is plain. The standard weight for a section of honey is, or should be, one pound (16 ounces). This, then, should mean a section of honey weighing fully one pound (16 ounces), *and not* a pound section of honey weighing anywhere from 12 ounces to 16 ounces.

Why is it that so many bee-keepers produce light-weight section honey? Is it not for the purpose of some one to receive pay for something they never possessed? A 24-section case of No. 1 honey should weigh fully 24 pounds (exclusive of shipping-case, of course). To do this, the sections should weigh from 15 ounces to 17 ounces; and in order to have them weigh this it will be necessary to have a little larger section than is now in general use. (Of this I will write in another article in the near future.)

The object in writing this article is to advocate the use of a little larger section, and to use methods that will give us as nearly as possible a uniform section, weighing as near 16 ounces as we can possibly get it. This would increase the sale of section honey so as to pay us well for the extra amount used to fill the larger sections.

According to certain grading rules, a 24-section case of No. 1 honey must average 21 pounds net. This is only 14 ounces per section. Is it any wonder that people are slow to buy an article for daily use as a food when they are being swindled in weight to such an extent as this, amounting as it does to 14 1/7 percent of the whole amount?

Produce an honest pound of honey and then sell it at a fair and remunerative price. This will do more to increase the demand for honey than anything else that bee-keepers can do.

Whitman Co., Wash.

Rapid Increase Through Afterswarms.

BY G. M. DOOLITTLE.

A CORRESPONDENT writes that he is anxious to increase his bees as much as possible the coming season by using the afterswarms for such increase, and finishes up his letter as follows:

"Please tell us something on this matter of increase through afterswarms in the columns of the American Bee Journal, for I have no doubt that others are interested in this matter as well as myself."

Before answering the above I would say that, as a rule, I do not think it pays to keep or build up afterswarms unless, perhaps, as in the case of the questioner, a more rapid increase is wanted; and that the one wishing such increase is not familiar with increasing rapidly by artificial means; for the reason that with the afterswarm goes all prospect for any surplus honey from the parent colony from which it came. To hive each first or prime swarm that comes generally allows of very nearly doubling the number of colonies in the apiary each year; and unless winter losses are great this would build up an apiary as fast as the experience of a novice would warrant did he expect to become the most successful apiarist. Then, again, the amount of surplus honey obtained from the parent colony from which no afterswarms are allowed to issue would, as a rule, sell for more than enough to buy good full colonies to take the place of the afterswarms, and thus all fussing with them will be saved. Of all the annoyances and nuisances in the apiary, with me, afterswarms are the worst. Many the bee-keeper in the past who would give ten times as much to know how to be entirely rid of afterswarms as he would to know how to build them up to good colonies for wintering.

But as all are not of this turn of mind, it is well to know how to prevent afterswarms and how to build them up where any one wishes so to do. Many articles have been written on how to prevent afterswarms, but articles on how to manage them and build them up so as to be in good shape for wintering, are very few indeed. I can conceive how one might wish to save afterswarms after such a loss in bees as was experienced a year ago, so that the combs from which the bees died might be saved and again occupied with bees, and so I am going to do my best to tell the questioner and the readers of the American Bee Journal how I used to do this when I was more anxious for bees than I was for honey, as well as some of my experience since.

The very first requisite toward a successful start for an afterswarm is a *frame of brood* in all stages, to be placed in the hive at the time of hiving them. As the queen with an afterswarm is never fertilized when the swarm issues, and seldom sooner than from one to three days later, and many times for a longer period, if the weather proves unfavorable from clouds and rains, it is all the way from two to ten days before she commences to lay, so that it is nearly a month from the time of hiving before any young bees emerge from their cells from this queen, by which time the bees going with the swarm are the larger part dead, dying of old age, which makes and keeps the colony weak as to numbers from the beginning till entering winter quarters. By giving a frame of brood this weak part is very materially helped, for, as fast as the bees die of old age young bees are emerging from this frame to take their places; and thus the queen, when she gets to laying, has suitable bees to mature the eggs which she lays, so that by the end of six weeks from the time the afterswarm was hived, we have a good, populous colony instead of a weakling.

This frame of brood is also of the greatest value should this afterswarm lose its queen when she goes out to be fertilized, by being caught by birds or otherwise. This is something which quite often happens, and when it does, where no brood is given, the fate of that colony is sealed, unless the bee-keeper is on hand to remedy the matter by giving a queen or some brood. By giving this brood when the swarm is hived, we are safe along all lines, for if the queen becomes lost, they have the material from which to rear another.

Then, if in addition to the frame of brood we can fill out the remainder of the hive with empty combs at time of hiving, or, better still, combs having some honey in them, we shall have a colony in the afterswarm at the beginning of the winter more valuable than are those from prime swarms, inasmuch as the queen will be at her best the next year, while the queens in prime swarms, where more than two years old, often begin to weaken and fail before the honey harvest of the next year.

In the absence of combs, more than the one containing brood, I would certainly use foundation for all afterswarms, even had I to pay 75 cents per pound for it, did I intend to winter the afterswarms. I am aware that such afterswarms will build almost exclusively worker-comb, and I have often used them up in such comb building, and used to think that there was profit in so doing, but if I wished them to become strong for wintering I would give them every advantage possible, and comb foundation is one of those advantages where we do not have the empty comb to give them.

Having them fixed as above, they are now in good condition except, perhaps, stores for winter; and if stores are lacking they must be fed, the same as any other colony which is short of stores when winter approaches. And if thus short, don't delay the feeding till cold weather, but do it just as soon as you reasonably expect that the honey harvest is over for the year.

"How much shall I feed?" Well, that depends where you are to winter your bees, whether in the cellar or outdoors. For outdoor wintering make sure that each colony has at least 25 pounds of good stores. From more than 30 years' experience I have found that this amount is needed, one year with another, to insure colonies wintered outside, from the time of the failure of flowers in the fall till their opening again in the spring. But where wintered indoors the above amount can be shaded by from 5 to 10 pounds. Yet, with the average bee-keeper, I should not advise the going into winter quarters, where bees are wintered in the cellar, with less than 20 pounds to the colony.

Onondaga Co., N. Y.

Convention Proceedings

Report of the Wisconsin Convention.

BY HARRY LATHROP.

The Wisconsin Bee-Keepers' Association met in convention at Madison, Feb. 1 and 2, 1905. The meeting was called to order at 2 o'clock p.m., Feb. 1, by Pres. N. E. France. Notwithstanding the very severe cold there was an attendance of about 40 bee-keepers, including Editor York of the American Bee Journal and Editor Putnam of the Rural Bee-Keeper. There were a few ladies, including the eminent writer on bees, Mrs. Millie Honaker, and Miss Candler, the successful owner and operator of 200 colonies. The bee-supply business was represented by Gus Dittmer, and G. E. Bacon of the G. B. Lewis Co. The others were mostly practical bee-keepers, some of whom own extensive apiaries.

Pres. France said that he had been unable to provide for a regular shorthand report of the session, and the editors present might take notes for publication if they wished.

The Secretary, Mr. Dittmer, was called on for his annual report, and said that his records had been destroyed in the fire that occurred at his place last year, in which his shop and all his office records had perished. A part of our book of records had been saved, and was presented in a damaged condition. This was the 21st annual meeting, and that book contained an interesting history of the work and growth of our Association. We all regret its loss, but no one attaches any blame to Mr. Dittmer.

Pres. France spoke of having local associations in the State affiliate with the State Association, and mentioned several ways in which this could be done. In New York State they have county organizations in which two members of each are accredited as delegates to the State convention, and have a part in all the deliberations of that body; the county associations paying a fee of $2.00 annually to the State Association, which entitled them to this representation.

Mr. Huffman called attention to the fact that it was very desirable that all local associations should be affiliated in order to aid the State organization in holding all valuable laws that we now have, and procuring other needed legislation for our industry.

Pres. France said he favored the New York plan of two delegates from each local. It was voted to have a committee appointed by the President to consider the question of affiliation, and report at a future session. Mr. Putnam and another member were appointed to act with Mr. France on this committee.

Pres. France said he believed there would be a large number of local societies organized in the near future.

In regard to our present meeting, it had been decided to follow the plan of the Chicago-Northwestern convention, and use the question-box instead of a regular program, allowing the meeting to develop the scope of its own discussions as it proceeded.

Before taking up the regular question-box, Pres. France read the questions that were asked of all candidates for the office of foul-brood inspector in the State of New York.

Pres. France explained how he had made the honey-map of the United States at the World's Fair in St. Louis, by procuring samples of honey from the different States. From these he had prepared smaller samples which he had brought along and presented for the inspection of the members. It was noticeable that the whitest honeys came from the North and West, while the samples from the Southern States were mostly dark.

The question-box was taken up at this point.

COST OF SECTIONS—ADVERTISING THE CONVENTION.

"Why do sections cost $5.00 per thousand when basswood excelsior is sold at $3.50 per cord of 52-inch bolts?"

Mr. Wilcox answered, saying that the higher price of labor, and also of lumber, made the price of sections higher. He had bought sections years ago as low as $2.00 per thousand, but did not think the manufacturer made anything at that price.

"Why is not our State convention advertised the same as those of other States?"

This question was introduced not for the purpose of criticising the officers for not advertising the meeting, but because it was not advertised earlier. It was brought out that the dates of the meeting could not be ascertained sooner, as we are dependent upon the action of other societies that meet at the same time, and with whom we have to co-operate in order to secure reduced railroad rates.

CANS FOR EXTRACTED HONEY.

The next question related to the jacket-can for extracted honey. Pres. France said that while the can in its present form had given good satisfaction, some improvements were to be made in its construction for the coming season. Some difficulty had been experienced in securing fourth-class rates for honey in this can, as they are not clearly covered in the classification. It is expected that this will be provided for before the next crop is ready to move.

The question of a seal for the cans, to prevent their being pilfered, coming up, a member recommended a paste for putting on labels, made by cooking two parts corn-starch, then adding one part honey. Paste the labels over the cap in such a way that it must be broken in order to remove the cap. Pres. France recommended a paste made from ½ pound of gum-tragacanth in an ordinary pail of water. This might be improved by adding ⅙ pound of furniture glue.

SELLING EXTRACTED HONEY.

"If I had a crop of 48 barrels of honey, where should I sell it if not to the commission-house?"

This brought out a discussion on the subject of having an association to sell the product for the members, the same as is done in some parts of the West. Pres. France pointed out the great difference between the conditions of Wisconsin and the bee-keeping districts of Colorado. He thought we were not so favorably situated as they were in the West for the operation of a honey exchange. Some members said they sold their honey mostly to private customers and dealers with whom they had established relations. These members did not need any aid in disposing of their crops.

Although this question has been up in each of our annual meetings for some years past, nothing of a practical nature has been accomplished in the direction of selling honey through a central organization.

Mr. Putnam said that their local association handled comb honey for the members and shipped it by the car-load.

Mr. Jaeger asked why we could not have an association to dispose of our honey, as well as other States, and said that if the whole State is too large, and the members too widely scattered, he would suggest that it be divided into districts.

WIRE FOR CUTTING GRANULATED HONEY.

"What size of wire is used to cut granulated honey?"

Mr. Wilcox replied that No. 20 annealed wire is the proper thing, and only well-ripened honey, when thoroughly granulated, could be cut in this way.

It was asked if it were advisable to melt extracted honey before selling it. The answer was, "Yes, if the customers desire it done."

EVENING SESSION.

This consisted for the most part of a stereopticon lecture on the subject of bee-keeping by Pres. France. The illustrations were very fine, and the lecture interesting and instructive to a high degree.

(Concluded next week.)

A Queen-Bee Free as a Premium.—We are now booking orders for untested Italian queens to be delivered in May or June. This is the premium offer: To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us one new subscription with $1.00 for the Bee Journal a year. Now is a good time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.

Our Sister Bee-Keepers

Conducted by Emma M. Wilson, Marengo, Ill.

Old vs. New Foundation—Getting Sections Filled

1. The latest number of the American Bee Journal mentions something that alarms me—that some people think that comb foundation may be too old to use to advantage. I bought a quantity a year ago last summer, and have some left—the heavy for frames, and the thin for sections. It has been left packed just as it came. Will this do to use this season, or ought I to get some new?

A number of questions have been suggested by the most interesting discussions reported from the National convention, which I am going to ask now, and shall be pleased to have them answered at any time.

2. Is there any special manipulation necessary to have all the sections in a super filled? Mine are always stuck together so tightly with propolis that I can not shift them without first clearing them of bees. Only once have I taken off a super that had 24 perfectly sealed sections. Do people usually succeed in accomplishing this result?

3. The honey often is attached to the section only at the top, hence I can not pack and send it away at all. Is this the fault of the strain of bees, or would it probably be corrected by putting a strip of foundation at the bottom, too? HELEN PERRY.

Clark Co., Kans., Feb. 1.

1. Packed as that foundation is, it will probably keep good for a generation. Even when fastened in frames or sections, it is good for several years.

2. In a good season probably most of our supers would contain 24 completed sections if left long enough. But we do not generally wait for that, but take off the super when all but a few of the outside ones are finished; generally all but the corner sections are finished when the super is taken off. Then the unfinished sections from several supers are put into a super and given back to a colony to be finished.

3. There may possibly be a little difference in bees about fastening the comb to the bottom of the section, but certainly not much. The honey-flow may have more to do with it, but with bottom starters you will probably find the difficulty overcome.

Italians vs. Other Bees—Report for Last Season.

DEAR MISS WILSON:—In the early fall I attempted to write something about my bees, and to ask one or two questions, which I have forgotten now. I started about three years ago, taking care of my brother's 4 colonies of common black bees. As I started in the fall of the year there wasn't much for me to do except prepare them for winter.

During the winter I studied the "A B C of Bee Culture." What I wanted next was experience. The bees wintered all right, and built up fast in the spring. After the clover season, which was a poor one, I thought I would Italianize 2 colonies, so I sent for 2 queens—one they accepted all right, and the other they killed.

I took much pleasure watching for the new bees. I had never seen Italian bees before, and there wasn't a day I didn't look in that hive to see how they were getting along. I decided I wouldn't have any other kind. But the next year, when they began to swarm, I thought there would never be an end to the bees in that hive, for I can truthfully say they swarmed seven or eight times, probably more, for aught I know. I then changed my mind about Italian bees, thinking they were all alike, but have learned different since. I have now Italians, hybrids, and common blacks, and find good and bad qualities in both.

In 1903 I had 27 colonies of bees to winter, but sadly neglected them, and the severe winter left me in the spring with only 6 colonies. That is, I doubled up some to make them strong enough to build up fast.

Last fall I put 12 strong colonies into winter quarters with the exception of one, which I must confess I could do nothing with the entire summer and fall—a strong colony of hybrids, which were as savage bees as I ever saw.

What would you do with them in the spring? Would you introduce an Italian queen? That is, if you could get near them? or if you couldn't, what would you do? Last year was a fairly good one for dark honey or buckwheat. Clover was checked by the dry season, but come to think of it, there was too much rain. I took off about 300 pounds of extracted honey and one super of comb honey.

I can easily sell more than I can get. There are only two other bee-keepers around here, and they are men. I would like to get some other women interested in bees, but they get frightened when I mention it, saying they are afraid of getting stung. Well, I was, too, but have gotten over it. ETHEL M. BURDETTE.

Hunterdon Co., N. J., Feb. 6.

Yes, it would be a good plan to give them a queen of gentler stock, if not too difficult to do so. But you may find that they superseded their queen last fall, and that the workers of the new queen are more gentle. And you may find, too, that without any change of queen there may be a change of temper. I have distinctly in mind a colony that was extremely cross, and the only thing that saved the head of that queen was the fact that we were so very busy that we let it slip along until too late to requeen that season. The next spring they were a good, strong colony, and did excellent work all season, and so far as we could see were quite as gentle as any colony in the apiary.

Report from a "Mother" Bee-Keeper—Severe Winter.

DEAR MISS WILSON:—If the rest of the sisters had been as slow as I have been in giving their reports you would not have had very many. I have had so much to do, and no one to do anything but me.

The past season was not a very good one. From 8 colonies I secured only 75 full sections, 22 not full, and 13 that I gave to one of the colonies to clean out. This colony did not have enough to winter on, and I made candy and put on the frames under the cushion. Week before last I looked to see if they had eaten it all, but there was quite a little left.

I have only 10 colonies; some have boxes over them with leaves packed between the boxes and the hives, and some have padding around them and a board set up in front of the entrance.

Last week we had the worst weather of the winter, and the most snow, and the wind blew so hard that the snow drifted badly. Saturday afternoon I shoveled through the drifts until I got to all of them, took away the boards and brushed the snow from the entrance, returning the boards after doing so. The snow had blown in between the boards and the hive until it was packed full, and I was afraid that they might smother. Now they can get air until another storm comes, and I hope that will not be this winter.

I had so much to do all summer that they did not get the proper care. I had 50 chickens and over 60 pigeons, all having to be fed and watered three times a day.

It took me all of week before last to make my chicken yard larger, digging holes, putting in posts, nailing on boards at the bottom and putting on the wire.

On page 72 the "Elder Sister" says that she is 70. I was 76 in December. How is this for a sister that does the work that I do? I look for the sisters' corner the first thing. MRS. SARAH J. GRIFFITH.

Cumberland Co., N. J., Jan. 30.

There is not usually much danger of harm from snow at the entrance. In fact, some count it an advantage to have it there so long as it is soft and porous, so the air can slowly work through it.

Perhaps at 76 one should be counted a "mother" rather than a sister. When we all reach the same age may we be as active.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

Mr. Hasty's Afterthoughts

OUR TOIL DOTH SWEETEN OTHERS

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

CELLAR-FEEDING OF SYRUP-FILLED COMBS.

C. P. Dadant succeeds pretty well in knocking out the plan of feeding syrup-filled combs in the cellar. Granting that something must be fed, candy has three decided advantages. First, one doesn't have to tear the winter cluster apart to give it to them; second, they will not get excited when they first find it; and third, the keeper can easily see, without causing any disturbance, how the supply is holding out. All correct; but I'll be off-oxed enough to talk back to the effect that *for other times in the year* the empty comb filled with syrup (or honey) by means of the—well, call it the "in-tractor"—and put right where it will do the most good—this going-to-be improvement is one of the good things which the future has in store for our craft. Page 86.

A "NERVY" ERROR.

In my corner, on page 88, read optic nerve instead of "optic never."

A BRAVE SISTER AND OTHERS.

Sister Wheeler's locality and climate (north end of Lake Champlain) are certainly very trying to run an apiary in. Surplus very late, and almost no pleasant weather from then till the opening of spring. That she and others nevertheless "make the riffles" is quite to their credit. Page 87.

HEAVY LOSS, BUT STILL CHEERFUL.

An excellent example of "count your mercies," we have on page 92. Losing all but 7 out of 148 (and the survivors with only a pint of bees each) would make some of us grumble—some of us cry, possibly. But here comes Mr. Hammersmark as our exemplar, crowing and congratulating himself that now he is going to have exclusively such a hardy and profitable strain of bees.

"CLOSE SPACING FOR WORKER-COMBS."

The British Bee Journal would not have had such a high and excellent reputation as it has did it always give such silly answers as that quoted on page 99. Possibly it is meant that the frames are also to be filled full of worker foundation. That would redeem it. Mere slips of comb, less than a half an inch in thickness because the crevices they were to fill didn't allow room for anything thicker, are often built with cells of drone size. And spacing frames 1¼ inches, or any other distance, is no assurance that the combs, when finished, will be according to guide, if they have starters only. If the bees want a drone-comb they will build it, and crowd the next comb over to that extent—sometimes omit the next altogether, or in part, and fill the space by bulging from both sides.

EVERY BEE-KEEPER HIS OWN HIVE-MAKER.

Ah, dear Boss, don't you forget to remember that this whole nation (except the culprits) is tender and excited on the subject of trusts. If you even seem to favor their side but a little there will instanter be lots of bees around your bonnet, if not in it. If you were a guest in the Russian royal family you would not argue very much in favor of the bomb-throwers—and you are in a somewhat similar fix now. The cabinet-maker has already "dressed you down" for saying that hives must be made with more accurate measurements than cabinet-makers and carpenters use—and here comes your friend and mentor to dress you some more for the logic in your first paragraph. If a man makes his own hives with profit it most decidedly *doesn't* follow that he can make for others with still more profit. He makes his own hives with his own hands; but if he wishes to enlarge in that line the vexatious question of hired help comes in and knocks everything endwise. Page 100.—[It is hardly necessary for us to say that we have no use for trusts or combines that have for their object the raising of prices unduly, and then keeping them elevated. We believe in the motto, "Live and let live!"—EDITOR.]

Honey as a Health-Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food", written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey". It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey the more honey they will buy.

PRICES, prepaid—Sample copy for a two-cent stamp; 50 copies for 70 cts.; 100 for $1.25: 250 for $2.25; 500 for $4.00; or 1000 for $7.50. Your business card printed *free* at the bottom of the front page on all orders for 100 or more copies. Send all orders to the office of the American Bee Journal.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Dimensions for a Honey-House.

I intend to build a honey-house in the spring. It is to be a storage-room, workshop and extracting-room combined, for a yard run for both comb and extracted honey. What size would you advise building for an apiary of from 80 to 100 colonies? New York.

Answer.—Rather hard to say; likely you'll find it none too large to have it 18x24 feet, two stories.

Maple Syrup for Feeding—Putting Bees Out of the Cellar

1. Would maple syrup be good for feeding bees in the spring for stimulative brood-rearing?

2. What is the best method to pursue in putting the bees on the summer stands in the spring? I have 150 colonies in the cellar in good condition, and I want to put them out very early in the morning, about 2 o'clock. Quebec.

Answers.—When the weather is warm enough so bees are flying every day it will do very well to feed maple syrup, or any other sweet that bees will take. No more should be fed, however, than will be used up in brood-rearing. If, however, it be fed at a time when bees can gather from the flowers, it will do little in the way of stimulating.

2. It will be all right to take bees out at night, or even the previous evening, provided the day following be favorable for them to fly. If it should turn out a bad day the bees might fly out, become chilled, and never return.

Bees Gnawing Starters in the Sections.

When double starters or full sheets of foundation are put in the sections don't the bees gnaw the starters off? I have been using the small triangular piece about ¾-inch wide, but find that the bees very often gnaw the piece entirely off, and often—*very* often—leave only the thin line of wax where foundation had been attached to the sections. I have also noticed that wider and longer pieces of foundation had been gnawed down to about ¼ of the original size. I want to use double starters above and below this season, but if my bees are to attack them and gnaw and mutilate them as has often been done in the past, I want to know how to correct this trouble. Virginia.

Answer.—I don't believe you need have any trouble of the kind. I'll tell you what I know about it. In a full honey-flow you will probably find that there is no gnawing, no matter what the size of the starters nor the kind of foundation. At the close of the harvest if they have a chance they are likely to do more or less gnawing. The thinner the foundation the more likely they are to gnaw. I prefer thin-super foundation to extra-thin. They are more likely to gnaw a little strip than a larger piece. With starters above and below, and not more than ¼ inch between them, the bees seem to think their first business is to fasten together the two pieces. For some reason they do not gnaw before harvest as they do after, and I don't remember any trouble even when sections were put on 10 days before needed. If you use thin-super foundation, and fill the sections with upper and lower starters, and then take them off with reasonable promptness when the season is over, I think your trouble will disappear.

Cleansing Flights—Bees and Fruit—Hybrids vs. Italians—Weight of Hives.

In reading about the care of bees in the cellar I have often noticed the caution not to leave them out too long when giving them their cleansing flight, as they may start to brood-rearing, or they may not do well in other ways.

1. Why should their case be different from those that have been on the summer stands all winter?

2. What are all the good points for the good of fruit-trees and their fruit in having a near-by apiary to work the honey out of the fruit-bloom, as I so often see advocated by the Government?

3. I have been experimenting since last spring with a hybrid colony and some red clover Italians by close observation in every way, and my judgment is that the Italians are superior in almost every respect. They gather more honey, build the combs just as even and full as the hybrids, are much more gentle, and, I believe, winter better, as I put the Italians out of the cellar last week to give them a flight, and did not find over a hundred dead bees. To-day I am giving the hybrids a flight, and find a full pint of dead bees on the bottom-board. I believe it will pay one to stock up at least every two years with good select Italian queens.

4. In weighing or hefting a hive, about what percent of the weight would you consider other than honey or food for the bees? Missouri.

Answers.—1. I don't know. Sometimes we know a thing without knowing why. There is also a possibility that there may not be so great a difference as supposed. We know, however, that bees are not exactly in the same condition before coming out of the cellar as those wintered out-doors. There is also a difference afterward, those from the cellar not being protected by packing, usually.

2. I'm not sure that I understand. If you mean in what way are we to secure all the good possible to the fruit from the bees, I don't know of any special thing to be done other than to have plenty of bees not farther than a mile or so away.

3. You can't be too sure from a single case. Next time you may happen to have a hybrid better than a pure colony. Yet your idea of getting in fresh Italian blood is good.

4. I don't know. It will vary according to the varying weight of the hive, cover and bottom-board. Empty combs vary no little, according to age. One hive may contain much more pollen than another. Find out as nearly as you can what your hives weigh with combs heavy with pollen, and add to that 8 pounds for bees (you'll not often find that many bees), then add 25 pounds more for honey for cellaring, and 30 for out-doors.

Dead Bees—Liquid Oozing from Hives.

I am a beginner in the bee-business. Last summer I bought 5 or 6 colonies of bees in box-hives. Some of them had no frames at all. Two were in dovetailed 8-frames hives with supers but no sections. They did not store much honey, but seemed to have plenty to last over winter.

This has been a very cold winter here. Since Jan. 2 the temperature has gone all the way from 3 or 4 degrees below to 35 degrees below zero. But at this time I think there are live bees in all the hives, except possibly one. Last fall I tacked heavy carpet-paper snugly around the hives and then placed straw and leaves around the north and west sides about ⅛ of the way up, and also underneath, as the hives were about 6 inches from the ground on the summer stands.

I clean the snow out of the entrance at the bottom every day, and find dead bees there. One of the colonies in the dovetailed hives seems to be very strong, no super on, and the bottom entrance was very small and constantly filled with ice from steam or condensation within. I have enlarged the entrance and find a great many dead bees. In some of the hives they come out and try to fly when it is zero weather, and from some others whenever it moderates a little liquid honey oozes out at the entrance.

I would be pleased to know what causes the honey to run out in this way, especially in such cold weather.

I like to work with bees, but have had no experience. I have been reading the American Bee Journal since Jan. 1, and hope to gain some information and instruction therefrom. Kansas.

Answer.—It is nothing out of the common for a comparatively large number of bees to die in winter, in every hive, from old age. It isn't the best way to disturb the bees daily by raking out the dead. Try to have it arranged another winter so this will not be necessary. Better have a space of two inches under the bottom-bars, and then if the entrance is at the upper part of this space there will be little danger of clogging the entrance. The vapor from the bees settles on the walls of the hives in the form of frost in considerable quantity, and when this melts the water will run out of the entrance. Sometimes the frost or moisture settles on the unsealed honey, and then sweetened liquid runs out of the entrance, as in your case. You did well to enlarge the entrance so as to allow free escape of the vapor and foul air.

Some Facts About Honey and Bees.—This is the subject of an article written by Mr. J. E. Johnson, and published on pages 581–82 of the American Bee Journal for Aug. 25, 1904. We have republished it in 4-page leaflet form for general distribution, and furnish it, postpaid, at 35 cents per 100 copies. Send all orders to the office of the American Bee Journal.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get them subscriptions, for which work we offer valuable premiums in nearly every number of this Journal. You can aid much by sending in the names and addresses when writing us on other matters.

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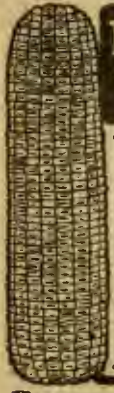

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Reports and Experiences

Good Honey Crop—Advertising Honey.

Last year I produced 2460 pounds, all extracted but about 200 pounds of section honey. This was secured from 10 colonies, spring count, and increased to 18 colonies, all of which are wintering on the summer stands with plenty of stores, and well packed. They had a good flight Dec. 31, that being a beautiful, warm day. But since then it has been very cold, the mercury dropping down to 36 degress below zero one morning. So I think that those who wintered their bees outdoors, and did not pack them properly, will find in the spring that they are no more.

I have about 1000 pounds of extracted honey unsold at this time, and I find the market very dull. So I thought I would try the "Honey as a Health-Food" pamphlets as a medium of advertising. I mean to mail a pamphlet to each of my friends and acquaintances, and even inclose one in every business letter I write. I hope this method will be successful, and I think it will be. I expect to increase my apiary to about 40 colonies next season, and will probably double the number of colonies for some years to come.

Sioux Co., Iowa, Feb. 6. G. GLEYSTEEN.

Hoffman and Closed-End Frames—Keeping Colonies Warm.

Overhearing a conversation lately between a bee-keeper and a man named Jack, who worked for him last summer, I thought I would send it to you.

"Well, Jack, what do you think of the Hoffman frame?"

"Well, boss, to tell the truth, in handling it I can find no fault. It is a good spacer, but in the extracting-room they don't like them at all, and I think I heard Jim and Tim say some very bad words about them."

"Well, Jack, what do you think about the all-closed-end frame hanging crosswise in a hive, keeping the bees warm in spring?"

"Well, boss, I don't know, but I think they

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1—11A5t

would be even worse than the Hoffman for extracting. Still, they might be warmer in spring for the bees, and I think a little too warm in summer."

"Well, Jack, I will tell you what happened to me some 25 years ago. I then used division-boards, and put each colony on as many frames as it could well cover every spring. But I missed one, and although I had taken out the spare combs, I forgot to put in division-boards. When it was time to spread their combs, and I came to this particular colony, I found 4 combs and the bees in the middle of the hive, but no division-boards, for I then used 2 division-boards for every colony in spring. I found some new comb started on both sides of the 4 combs, but built on the cover which was a flat one made of one board. On lifting the combs out I found the 4 combs were pretty well filled with brood—just as well filled as any of the stronger colonies with division-boards, for all my strongest colonies were put on not more than 4 combs shortly after being put on the summer stands. They were left that way till about the middle of May.

"Now, Jack, I will tell you how this unlooked-for dose of medicine acted upon the division-board fever. At first I didn't know which to do, put in division-boards or fill out with combs, but I put in the combs. In a few days I looked in, and to my surprise they had new pollen and honey stored in the very outside combs. Out came all the division-boards from every colony, their hives filled out with combs, and I was completely cured of the division-board fever, and never used them thereafter except when I wanted brood in only a few combs.

"When I read articles about making hives and frames to keep a colony of bees warm, as lately advocated by Allen Latham, I must say the dose acts with full strength, as it did about 25 years ago. My aim now is to get good colonies with plenty of young bees, a good, young queen, and 30 or more pounds of good, capped honey to go into winter quarters, and they will keep themselves warm in the spring.

"No, Jack, I don't believe in those warm-hive and warm-frame stories, but I believe in good colonies in the spring. Weak colonies keep warm nowhere, while good colonies keep warm anywhere, even in a hive made of lumber ½-inch thick."

"Well, boss, this looks as if bee-keepers ought to try to invent warm colonies instead of warm hives and frames, for I don't believe, myself, that a warm hive will keep warm un-

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less a good, warm colony of bees is in it, but still it may be locality. For instance, we bee-keepers just a little this side of the North Pole never lose any bees in winter. If feeding has to be done, we raise the front of the hive with an entrance-block, pour in the feed and call it the best feeder that ever was invented. Farther south they use good feeders, but lose bees in winter."

"Well, Jack, you see they have an eye only to surplus honey, while we in this poor bee-country must have an eye to winter stores first."

"Well, boss, you see it's all locality."

W. F. Fritze.

St. Louis Co., Minn., Feb. 3.

Winter Losses May Be Heavy.

Bee-keepers here never do any wintering in the cellar, and are very careless about packing for winter. The bees generally come through all right, but I'm getting a little fearful this time. It has been a snug winter since Jan. 1, and we had another blizzard yesterday.

I have 75 colonies on the summer stands, and may lose 50 percent if this weather continues much longer. As our fall honey here is very dark and heavy, it is not the best to winter on with long confinement.

H. A. Bushby.

Republic Co., Kan., Feb. 12.

Results for Last Season.

I am wintering 40 colonies in 8-frame dovetailed hives in a cellar under the dining-room. I wintered 32 colonies last winter, and sold 2 or 3 colonies during the past season, so you will see that I was pretty successful in preventing increase, for which I have to thank the Editor and writers of the American Bee Journal.

My last season's crop was 900 pounds of comb and 300 pounds of extracted honey. I have disposed of most of the crop at very satisfactory prices in three towns near by.

During our 21 years continued residence on the farm it has grown from 160 to 480 acres. When we moved on it our family consisted of my good wife, our baby boy 7 months old, and myself. Our "baby boy" is still at home, although he is past 21 years of age, and we also have a boy aged 18, and twin girls aged 10, who are lots of help to their mother as well as to me, in helping to care for the bees.

W. H. Root.

Wayne Co., Nebr., Jan. 31.

Fastening Starters in Sections.

I notice a good many have trouble in fastening starters in sections. A good way is to put the starters on before folding with hot wax. First fill a 2 or 3 gallon kettle with water and beeswax to within about one inch of the top. Heat it till it begins to foam, and then set it off on a work-bench over a lamp. While the wax is heating cut the starters, lay the sections all one way, and inside up, close to the kettle. Pick up a handful of sections and lay them on the kettle over the hot wax. Now pick up a handful of starters, dip the edge of a starter in the wax and put it where it belongs quickly. Hold it up 2 or 3 seconds so it will not lop over. Lay the sections on a 4-foot board, side by side, until all are ready. Set them to one side and fold and super at your leisure. Try it. It is not necessary to have the lamp unless you have a good many sections to fix up.

Alvah Reynolds.

Knox Co., Ill.

Loss of Bees—Rains in Southern California.

Judging from reports from bee-keepers in Southern California, or lack of reports for the past year, one would think this was not much of a bee-country. But there are some bee-keepers and a few bees left, though it has cost considerable labor and some money to carry the bees through a whole year by feeding. The careless and faint-hearted, who keep bees because they "board themselves" and allow their owner to eat with them, have dropped out because they have found that (such) bee-keeping doesn't pay. I know of one man who had 65 colonies a year ago, and now he

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has only one left, and a large supply of wormy combs and cocoons. All died from starvation.

Another who had 300 colonies in the mountains, but lives in town, went out about the middle of the summer to see what condition they were in, found them on the point of starvation, and before he could get sugar to feed them, he lost 150 colonies. He fed the rest well, and has lost but very few since. Most of the real bee-keepers have carried their bees through without a very great loss.

In my own apiary I have 82 colonies left from a total of 103 a year ago. The loss has been caused by loss of queens principally, as there were no swarms and no drones to fertilize the queens where queens were superseded. I have also lost a few by the depredations of "hoodlums."

I have fed about 1500 pounds of honey and sugar at a cost of $72—an average of about 90 cents per colony—and they have enough to carry them through till honey comes in from the fields. We have a very good prospect for a honey crop, as there have been since the last of December frequent and copious rains, totaling 10.86 inches for the season, and the season for winter rains is only about half passed. In the mountains where most of the honey is produced, there has been considerable more rain. F. C. WIGGINS.

San Diego Co., Calif., Feb. 1.

Management with Box-Hives.

I secured a half ton of extracted and a half ton of comb honey in 1904 from 40 colonies. I now have 60 colonies, and am buying other bees. I have 26 colonies in box-hives which I wish to transfer to Higginsville hives in the spring.

Last year I returned all swarms with clipped queens, but even when I left a mature queen-cell the bees invariably started other cells. Then when the queen emerged and found the other cells, out she came with a swarm.

I want honey and not increase, and I would

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AGENCIES.—Trester Supply Co., Lincoln, Neb.; Shugart & Ouren, Council Bluffs, Iowa; Fulton & Ford, Garden City, Kan.; I. H. Myers, Lamar, Colo.; Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex. KRETCHMER MFG. CO., Red Oak, Iowa.

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like to know how to transfer the bees from the box-hives, and also the latest method for working bees in movable-frame hives for section honey.

The bees have ample stores of good honey. They are in box-hives in the cellar, 20 in double-walled, and the rest in dovetailed hives. George R. Kelly.

Cooper Co., Mo., Feb. 6.

[Any of the standard bee-books give full details for transferring bees from box-hives into movable-frame hives; also by studying such books, and this Journal from week to week, any one will soon get the latest methods of working for comb or section honey.—Ed.]

Foul Brood—Bees Wintering Well.

Bees did fairly well the fore part of last season, but the middle and latter part they did very little. I got no surplus honey last year, and had to feed a great deal for winter stores. I found some dead brood, which I fear was foul brood and will make its appearance again this year. If it is foul brood it is something that never appeared in this locality before.

The bees seem to be wintering well, although we are having rather cold weather, the temperature being as low as 14 degrees below zero at one time, and it is very cold today.

Success to the American Bee Journal.

A. J. McBride.

Wayne Co., N. C., Feb. 16.

Rains in California.

We have the February rains I mentioned a month ago, and now we look forward to the March rains. If we get them our season will be all a bee-keeper can desire. We will show those Texans what California can do. We have just had such abundant rains that even if we did not get any in March, and but 2 inches or so in April, it would give us a good crop of honey. Our winter has been unusually mild—only one or two frosts.

C. W. Dayton.

Los Angeles Co., Calif., Feb. 23.

HONEY-JARS.

For a limited time we offer No.25 Honey-Jars, porcelain cover, metal screw cap, holding one pound of honey net, one gross in case complete, in 5-gross lots, $4.00 per gross; less quantities, $4.50 per gross, f o.b. New York. If you want to secure some, let us know at once.

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Forty Years Among the Bees, by Dr. C. C. Miller.—This book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with 112 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard. The first few pages are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees. Price, $1.00.

Bee-Keeper's Guide, or Manual of the Apiary, by Prof. A. J. Cook, of Pomona College, California. This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 544 pages. 295 illustrations. Bound in cloth. 19th thousand. Price, $1.20.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, $1.20.

A B C of Bee-Culture, by A. I. & E. R. Root.—A cyclopedia of over 500 pages, describing everything pertaining to the care of the honey-bees. Contains about 400 engravings. It was written especially for beginners. Bound in cloth. Price, $1.20

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, $1.00; in leatherette binding, 60 cents.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages. Price, in cloth, 75 cents; in paper, 50 cents.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages; bound in paper, and illustrated. Price, 50 cents.

Bienen-Kultur, by Thomas G. Newman.—This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience. Price, 30 cents.

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He will furnish at same prices as last year: Tested, $1; Untested. 75c; 5 for $3.25; 10 for $6; 15 for $8.25; 25 for $12.50; 100 for $45. He breeds Goldens, Carniolans and 3-Band Italians. Also 1, 2, and 3 frame Nuclei, and full colonies. Prices given on application. Pharr pays the freight, and guarantees satisfaction on all Queens. To do justice and judgment is more acceptable with the Lord than sacrifice. —(Prov. 3: 21.) 6Atf

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Basswood Trees.

8 to 10 feet, 25 cents; 6 to 8 feet, 20 cents; 4 to 6 feet, 15 cents. G. W. PETRIE,
10A3t FAIRMONT, MINN.

Engravings For Sale

We are accumulating quite a stock of engravings that have been used in the American Bee Journal. No doubt many of them could be used again by bee-keepers in their local newspapers, on their stationery, or in other ways. Also, if we can sell some of them it would help us to pay for others that we are constantly having made and using in our columns. If there is any of our engravings that any one would like to have, just let us know and we will quote a very low price, postpaid. Address,

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Sweet Clover Seed
FOR SALE
50 lbs. or over, at 5 cents per pound. Address,
5A9t JOSEPH SHAW, Strong City, Kans.

Where Honesty Paid.—Near Shenandoah, in the famous Iowa corn-belt, lies Sleepy Hollow Farm. Here, some 11 years ago, a young market gardener concluded that instead of confining his efforts to gardening for the consumer, he might as well be raising seed for the producer. Having been raised a gardener, his early experience and training rendered him peculiarly adapted to the business of a seedsman; to anticipate the needs and avoid causing the trouble and annoyance which so often vex the patience of the truck farmer. At the start he determined that only reliable seeds should be sold under his name, and only those he could guarantee; that full measure, just weight, and true description should be the rule. He began by making his neighbors his first customers, and they soon discovered that in him they had a man who could always be depended upon to furnish nothing but honest goods. They spread the news to others, and the ever widening circle of pleased patrons necessitated the steady increase of his facilities, until now the name of Henry Field, Seedsman, or, as he is often called, the "Ear Seed Corn Man", is known far and wide among farmers and gardeners throughout the Middle West. His annual catalog is a mine of information on seed subjects, and a carefully prepared list of good things to be found in the "Red Packet" seed packages, red packet being Mr. Field's method of identifying the seeds shipped from his establishment. Before purchasing seed it is worth while securing a copy of Mr. Field's catalog, which he sends free of charge, and becoming acquainted with the good things he offers. The 1905 edition is now being sent out. Please mention the American Bee Journal when writing.

The Emerson Binder

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

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CONVENTION NOTICES.

Illinois.—The Western Illinois Bee-Keepers' Association will hold its spring meeting April 5, in the County Court Room, in Galesburg. Seasonable subjects will be discussed. Each meeting so far has been more interesting than the previous one, and we hope to continue that way. We earnestly invite all who are interested in this industry who are within easy reach of Galesburg, to be at this meeting.

E. D. Woods, Sec.

Michigan. — The Northern Michigan Bee-Keepers' Association will meet in Lady Maccabees Hall, at Central Lake, Wednesday and Thursday, April 5 and 6, 1905. Hotel rates will be, The Tavern, $1.50 per day. Editors A. I. Root and W. Z. Hutchinson will be present; also E. D. Townsend, Geo. E. Hilton and a number of other practical apiarists of Northern Michigan. If you have never attended a convention let us suggest that you try it for once, and you will have a higher opinion of your calling when you leave. W. Mohrmann, Sec.

Geo. H. Kirkpatrick, Pres.

Utah. — The Utah Bee-Keepers' Association will hold its spring convention in the Mayor's Office, City and County Building, April 7, at 10 a.m. All are invited. Matters of great interest to bee-keepers, and horticulturists will be considered. Cache Valley's experience of killing the bees by poison spraying in the bloom must not be repeated. Jot down your thoughts on this or any other question, and bring or mail the same. G. E. Garrett, Sec.

E. S. Lovesy, Pres.

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Honey and Beeswax

Chicago, March 8.—There has been somewhat of an increase in the number of sales during the past 4 weeks, yet the volume has not been large, while prices are if anything lower than in January, especially on other grades than white clover. Fancy grades of white comb bring 12½@13c; No.1, 12c, with some off in color at 11@11½ cents; amber grades slow at 8@10c. Extracted, white, 6@7c; amber, 5½@6½c; the price being governed by quality, flavor and package. Beeswax, if clean and good color, 30c per pound. R. A. Burnett & Co.

New York, March 11.—There is no improvement in the comb honey situation. The demand is next to nothing; quotations nominal and no doubt some of the stock will have to be carried over. We quote fancy at 13c; No. 1 at from 11@12c, and dark at from 9@10c. Extracted is in fair demand: White at from 6@6½c; light amber at 5½c; Southern in barrels from 50@57c per gallon, according to quality. Beeswax firm at 29c. Hildreth & Segelken.

Boston, March 9.—The demand for comb honey still continues light with heavy stocks on hand. Fancy white, 15@16c: No. 1, 14c. Extracted, 6@8c, according to quality.

Blake, Scott & Lee.

Kansas City, Feb. 25.—The honey market is still very lax, with scarcely any movement at all; the best white comb stock, 24 section cases, is selling here at $2.25 per case. Extracted moving all the way from 4½@6½c per pound, according to quality. We look for an improvement. Beeswax in good demand at 28c.

C. C. Clemons & Co.

Cincinnati, O., March 8.—The comb honey market has been a drag the last month; this caused the holders to offer extra inducements in prices. Quotations obtained are as follows: No. 1 fancy water-white comb, 12@13c; No. 2, 10½@11½c. Extracted: white clover in barrels, 6½c; in cans, 7½@8 cents; amber, in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c.

C. H. W. Weber

Philadelphia, March 10.—Since our last quotations, honey has been gradually declining, and at the end of the season for comb honey especially, commission men and holders are offering at most any price to clear out their stock. Fancy white, 14c: No. 1, 11@12c; amber, 10c. Extracted, white, 7@8c; amber. 5@6 cents. Beeswax, 28c.

We are producers of honey and do not handle on commission. Wm. A. Selser.

Albany, N.Y., Feb. 8.—Honey market dull this extreme cold weather, especially comb, which candies or granulates and cracks easily. We quote: Fancy white, 13@14c; No. 1, 12@13c; mixed, 10@11c; buckwheat, 10@t1c. Extracted, better demand: Buckwheat, 6@6½c; white, 6@6½c. Buckwheat most in demand, as the Jewish people will have no other. Beeswax, 30@32c. H. R. Wright.

San Francisco, March 8.—White comb, 1-lb. sections, 11@12 cents; amber, 8@10c. Extracted, white, 6@6½ cents; light amber, 4½@5½c; amber, 3¾@4¼c; dark amber, 3@3½c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

Not much strictly choice water white honey on the market, either comb or extracted, but there is considerable amber stock, including some from the Hawaiian Islands. For ordinary grades the market is easy in tone, with demand slow.

Cincinnati, March 10—There is little, if any, improvement in the honey market here, since our last quotation. We hope to render a more encouraging report soon. We quote amber extracted honey in barrels and cans at 5½@6½c. White clover at 7@8c. Fancy white comb at 12@13c. Beeswax, 28c.

The Fred W. Muth Co.

Langstroth on the
Honey-Bee
Revised by Dadant—Latest Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.20, or club it with the American Bee Journal for one year—both for $2.00; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

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American Bee Journal

45th Year. CHICAGO, ILL., MARCH 30, 1905. No. 13.

APIARY OF H. GIBSON, OF ONTARIO, CANADA.
(See page 244.)

HOME APIARY OF F. Z. DEXTER, OF RICHLAND CO., WIS.

Every Bee-Keeper

Or Prospective Bee-Keeper

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We are certain that any one interested in bees would be greatly benefited by becoming a subscriber to GLEANINGS IN BEE CULTURE. We want you to give it a trial. After you have received a few numbers we are sure you will become a permanent subscriber. We therefore make a special trial offer of 6 months for 25c. Fill in your name in space below, remit 25 cents, and the paper will begin at once.

Enclosed find 25 cents, for which send me Gleanings in Bee Culture 6 months.

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Root's Goods in Chicago.

For the saving of freight for our western trade, as well as to give much quicker delivery, we opened a branch office in Chicago, Oct. 1, 1903. The following taken from our catalog of last year, explains the transfer then made:

The business for many years conducted by George W. York & Co., at 144 E. Erie Street, as agent for The A. I. Root Company's supplies, is this day transferred to The A. I. Root Company, to be conducted as a branch office. Please note change of name to avoid confusion in our work. THE A. I. ROOT CO.
October 1, 1903.

To Our Customers and Friends:

In transferring back to The A. I. Root Company the bee-supply business, which we took over from them some years ago, we do so with regret, as we have labored hard to build up a large and honorable trade in bee-appliances, and value beyond expression the valuable patronage accorded us during the years. We trust the same will be continued to our successors in the business.
GEORGE W. YORK & CO.
Chicago, Ill., Oct. 1, 1903.

The conveniences offered by the branch office were evidently appreciated by the bee-keepers of Illinois, Wisconsin, and other States beyond, for the business done by the branch was much beyond our expectations. During the rush season—April, May and June—orders came in so fast that, in spite of frequent orders to the factory for another car of goods, the stock ran low, and some delays and annoyances thereby were caused. Some little confusion because of change of name and manner of conducting the business (from agency to branch office), but these have all been overcome. We are better than ever prepared to handle your business carefully and promptly, and solicit your patronage.

Low Freight and Quick Delivery.

A glance at any railroad map will show the superiority of Chicago as a shipping-point. Because of the great number of railroad and steamboat lines centering in Chicago, and the large stock of goods we carry, we can give you the best of service. This office is in constant touch with the factory and home office, and in many cases can give your order quicker attention and earlier shipment than the factory, to say nothing about the saving in time and transit and lower transportation charges.

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We are prepared to furnish goods at wholesale and retail, the same as the home office.

Terms.

Our terms are cash with the order. We pay cash for material, and pay our helpers cash every week for their work; therefore we must have cash in advance for the goods furnished. Do not ask for credit.

Beeswax Wanted.

We are in the market for good beeswax the entire year, and pay the same prices as quoted by our home office in each issue of GLEANINGS IN BEE CULTURE. Send your wax direct to us for cash or in exchange for supplies.

Extracted Honey.

In the course of a year we use large quantities of extracted honey, and are pleased to get sample and prices from parties who have honey to exchange for supplies. We are also prepared at all times to furnish first-class honey to any one who is in need of same, either bee-keepers who have a demand for more than they can furnish, or from dealers. Get our prices before you place your orders elsewhere.

DANZENBAKER HIVE.

"Facts About Bees", a 64-page book written by Mr. F. Danzenbaker, giving a complete description of his famous hive and directions for using. Full of valuable information. Sent on receipt of a 2-cent stamp to pay the postage. **Send for it.**

The Danzenbaker Hive

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Three Points of Excellence:

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You can produce better-looking honey.

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You can produce more of it.

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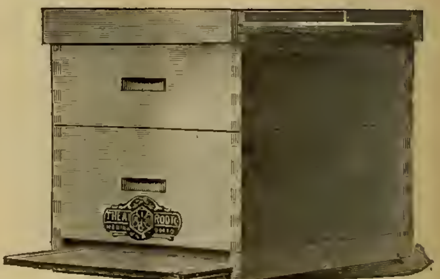
You can get more per pound for it.



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THE OLDEST BEE-PAPER IN AMERICA
Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor. CHICAGO, ILL., MARCH 30, 1905. Vol. XLV.—No. 13.

Editorial Notes and Comments

The National and Incorporation

Mr. Editor:—You ask (page 197), referring to incorporation, "Will the Association take any advantage of the added power and responsibility?" Take the case mentioned, page 197. When reparation was desired, and the National was asked, "Are you incorporated?" if it had been incorporated, do you, or don't you, think the Association would have taken advantage of its power to say "Yes?"

C. C. Miller.

We "don't know." Perhaps it would have done so. But it never did take any advantage of incorporation when it was incorporated, some years ago. Would it do so now, if incorporated?

Alfalfa in the South

To those who are used to thinking of alfalfa as a permanent crop lasting 50 years without re-seeding, it sounds strange to hear the Sugar Planters' Journal say that in the sugar districts alfalfa generally requires re-planting each year, owing to other grasses crowding it out. "But the fact remains," it continues, "that with three to six cuttings annually it pays to sow each year."

"There are sugar planters who have been planting alfalfa for years," and it would be interesting to know whether these planters have noted that bees have taken any interest in the blossoms.

Comb Foundation from the Rietsche Press

A sample of this has been received from Adrian Getaz, the man who makes the presses. It would probably be classed as heavy brood, and it is not likely that foundation suitable for sections could be produced on this press. In Europe, where thousands of Rietsche presses are in use, very little section honey is produced. For some reason the incipient cell-walls are much more distinct on one side than the other. The foundation has a soft feeling, like that formerly produced on the Given press, and would no doubt be very promptly accepted by the bees. Those who care to make their own brood foundation could at least make the experiment at a very small outlay.

Freezing Worse in Cellar than Outdoors for Bees

In a locality where the temperature never goes lower than 10 or 12 degrees above zero, one would never think of putting bees in a cellar, yet in colder localities a cellar would be considered unfit to winter bees if it should ever go as low as that, or even within 20 degrees of it. If it be so very bad in a cellar, why not just as bad outdoors? After discussing the question quite fully in the American Bee-Keeper, Frank W. Proctor says:

> To sum up: A fall of temperature to the freezing point leaves the outdoor bees much more comfortable and better able to maintain their normal temperature than those in the cellar because (1) the air in the outdoor hives is much drier, and (2) because the bees outside have occasional opportunities for evacuating the waste arising from any excess of food they may have to consume during cold spells.

Bee-Culture in the Department of Agriculture

Through the kindness of Mr. Frank Benton, in charge of Apiculture in the United States Department of Agriculture, we have received a copy of the Report of the Entomologist, Mr. L. O. Howard, for 1904. In it we find the following referring to the

> WORK IN BEE-CULTURE.
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> A great increase in correspondence on all topics relating to apiculture so far occupied the time of the single investigator in this line that original investigations had to be limited. This correspondence covered nearly every phase of the subject, and came from all parts of the country, indicating a very general increase in the interest in this branch, and often required special letters of some length to elucidate the information needed. Frequent assistance was rendered teachers connected with the public schools and normal institutes where the natural history of the honey-bee, and in some instances elementary instruction in the general methods of bee-management, formed a part of the course. Advice was also given in some instances to agricultural colleges contemplating the institution of special courses in apiculture.
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> A small number of choice queens of the Cyprio-Carniolan cross, which has proven such an excellent one for the arid regions of the South and West, were sent out. The extremely dry season in Southern California has given a severe test of the remarkable energy shown in honey-collecting by all crosses containing Cyprian blood; and while it has been necessary in many apiaries, in order to prevent starvation of the colonies, to feed a large proportion of the Italians and hybrids which are chiefly kept in that part of the country, reports have been sent in showing that 30 to 40 pounds of honey per colony have been found in the same apiaries in hives whose queens were largely of Cyprian blood.
>
> The comparative test between the Caucasians and other types of bees, including Cyprians, Carniolans, Italians, and various crosses between these types themselves, and also with accidental matings with black drones, has been continued. The conclusion was reached that the Caucasian race was by far the gentlest honey-bee that has ever been brought to this country. Every manipulation necessary in the apiary can be performed with Caucasian colonies with the use of the bee-veil, and only in rare instances has it been necessary to apply smoke to control them. Very small quantities were then employed. Under nearly all circumstances it would almost be believed by all observers that these bees were stingless. The test regarding their honey-producing qualities has not been as conclusive, since the past year was, in general, a poor one in this region. However, in so far as the comparison extended, it was found that they held their own in honey-gathering by the side of the Carniolan race, although not equaling in this respect the Cyprian crosses mentioned above.
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> The revival in various newspapers of stories relating to the manufacture and marketing of comb honey has called for repeated denials and a plain statement of the absurdity of the whole matter, as well as the great injury it was working to the apiarian industry of the country. The newspapers and other publications which had inadvertently been led to publish these inaccuracies have nearly always been very ready, upon a proper presentation of the case, to insert a correction. Particular attention has been drawn to the fact that it would cost far more, by any process whatever, to produce a wax, or imitation-wax comb, fill it with honey, or any mixture designed to resemble honey, and then seal it over ready for the market, than it would to maintain and care for an apiary of the required number of colonies to produce through the agency of the bees themselves the same quantity of natural honey. This shows at once the absurdity of the claim that the greater part, or any part, of the comb honey on the market is an artificially manufactured product. This showing has also been followed by a statement of the fact that a reputable firm has for 20 years offered to forfeit $1000 to any person who could produce artificially an imitation of comb honey which would deceive any person when compared with combs that are filled and sealed by the bees themselves.
>
> Early in the fiscal year the apicultural investigator visited the arid regions of the Southwest, making an extended inspection of apiaries over the whole of Southern California, and further investigations in the central and northern parts of the State, with a somewhat cursory view of the conditions of the industry in Oregon, Washington, and

Montana. The conclusions resulting from this tour were to the effect that the introduction of various types of bees adapted in each instance to the respective climates and peculiarities of these regions, together with the introduction of certain honey-plants from other portions of the world, which, from similarity of climate, etc., would be certain to thrive in the portion of the country visited, would result in a very important increase in the honey-production of the West. The execution of this work is therefore advisable in the near future.

* * * * * * * *

In the same way the Bureau will be able during the fiscal year 1904-5 to devote more attention to apiculture than has hitherto been possible. It is proposed as a first step during this fiscal year to establish a model apiary of 50 or 60 colonies of bees at the Arlington Experimental Farm. This apiary will be used in the general conduct of apiarian investigations, and as one of the breeding stations of the races or types of bees which are under observation. Queens of the Caucasian, Cyprian, Dalmatian, Italian, and Carniolan races will be imported for breeding purposes and testing at experimental stations and other places in different sections of the country. Some investigations will be made, and possibly an importation of the bees of the far East, particularly of the large races commonly known as the Giant Bees of India, one species of which is also found in the Philippines. It is believed that these bees would secure the nectar from flowers with deep corolla-tubes, such as the red clover, etc., the sweets in which are, for the greater part, beyond the reach of our ordinary races.

Plans have been made for the procuring and testing in different parts of the country of a number of valuable honey-producing plants which are known to be adapted to portions of our country where intervals in the honey-flows occur which may thus profitably be filled in. In this work preference will be given to such plants as have an economic value besides their production of honey.

Numerous complaints of the devastation of apiaries in different portions of the country by diseases, some of which are highly contagious, call for an investigation of the whole subject of bee-diseases. Some of these diseases can be dealt with during the coming fiscal year, but others, of a bacterial nature, will require a more extended investigation than the funds will permit at present.

It seems desirable to test the efficiency of artificial heat in the wintering and rapid breeding up of bees. The apiary at the Arlington Experimental Farm will be available in this work. Likewise the construction and testing of hives and accessories adapted to migratory bee-keeping.

In addition to the experimental work enumerated above, the collection of data regarding the industry in the United States, and particularly as to the honey-producing plants of the country, will be continued. Bulletins on pasturage for bees and the manner of increasing it, with cultural and other notes on new honey-producing plants; on best methods of rearing queen-bees; and on migratory or pastoral bee-keeping, have been planned. A limited number of queens of improved races will also be reared and placed for testing at the various experiment stations which do work in apiculture, and likewise in the hands of special agents for testing in particular sections of the country.

Surely, the Department has outlined some exceedingly interesting and important experiments and investigations in behalf of the bee-keeping industry of our country. We hope to receive reports of progress from time to time, so that we can keep our readers informed of the apiarian work our Government is doing under the direction of Mr. Frank Benton, who is its very competent Apicultural Investigator.

Miscellaneous News ∻ Items

OUR TOIL DOTH SWEETEN OTHERS

"Bee-Keeping in the Southwest"—a subject on which Louis H. Scholl is writing a series of articles for the American Bee Journal—has been discontinued for the present, first, on account of the illness of Mr. Scholl, and also because of his extra college work in Columbus, Ohio, where he has been spending the past winter. Mr. Scholl is a devoted student, and has applied himself so constantly to his studies that it has resulted in overwork, although it has also put him ahead of his fellow students, so that he completed the term's work in advance of the others. He has gone to Texas, where he will put in his time with the bees during the summer, and also help prepare for the meeting of the National Bee-Keepers' Association at San Antonio in the fall. As soon as he is physically able, and his duties will permit him to reach it, he will continue his articles for this Journal.

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The General Manager of the National, Mr. France, sent in the following interesting items, March 17:

Another victory for the National Bee-Keepers' Association. The city of Kirkwood, Ill., passed an unconstitutional ordinance that not over 5 colonies of bees could be kept on any city lot. A purely spite case. One hundred colonies will be moved in the spring, now that the matter is settled. This saves neighbors, and betters the home market for honey.

Again, I have received some syrup samples issued by the Syrup Refinery Co. They have the best labels for honey I ever saw, and very cheap. They are in five colors, showing clover leaves and clover heads with bees working on them, all life size on the labels, and in bright colors. I hope before the time for the National members to market their honey to get such labels before the members, as I am after anything to help them sell their honey near home.

Good honey prospects are reported from California, Colorado, Texas, and Cuba.

Northern bees are reported wintering well, also good clover prospects.

It has been decided to hold the next National convention in San Antonio, Tex. N. E. France.

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Apiary of H. Gibson.—Four little views of Mr. H. Gibson's apiary appear on the first page. He had this to say about them when sending us the pictures:

I enclose four snap-shots of my apiary.

No. 1 is a swarm of bees just hived, which covers the front of the hive and quite a space on the ground.

No. 2 is my son and myself, where I scraped up two handfuls of bees from the swarm shown in No. 1. You will see we have no veils on, and are barehanded.

No. 3 shows my wife and apiary.

No. 4 shows the back of the house and part of the apiary.

H. Gibson.

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Apiary of F. Z. Dexter.—This is shown on the first page. When sending the picture, Mr. Dexter wrote thus:

As some of the noted bee-keepers are getting pictures of their apiaries in the papers, how would ours look? You might ask what we are noted for. Well, for reading the old American Bee Journal every week. I send a picture of our home yard that was taken some time ago. You can easily recognize the "old man," and my son and oldest daughter are the other persons in the picture. My place is named "Pine View." F. Z. Dexter.

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Hurrah for Missouri Bee-Keepers!—Just a little too late to catch last week's issue, we received the following from Mr. R. A. Holekamp, of Missouri, which will be read with great interest by the bee-keepers of that State:

Dear Mr. York:—I send you to-day good news for the bee-keepers of Missouri. Our Apiary Bill has now been passed by both Houses of our Legislature, and as it has an emergency clause, and an appropriation of $2000 has been made in the general appropriation for the purpose of this Bill, it will become effective as soon as signed by our Governor.

If an inspector of apiaries can be selected and appointed during the next month, he could probably start on his work of inspection by the time the bees begin to gather honey, and good work ought to be done this season.

I wish to thank you for the assistance you have given us by publishing my former communications in the valuable American Bee Journal. Robt. A. Holekamp,

Assistant Secretary Missouri State Bee-Keepers' Association.

We congratulate Missouri bee-keepers upon their success. It shows what persistent and determined effort will sometimes do when put forth in a righteous cause. It will also be an encouragement to other States that should have similar legislation.

Later.—We have just learned that Gov. Folk has vetoed the above Bill after having passed both branches of the Legislature. More about this next week.

Honey as a Health-Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food", written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey". It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey the more honey they will buy.

Prices, prepaid—Sample copy for a two-cent stamp; 50 copies for 70 cts.; 100 for $1.25: 250 for $2.25; 500 for $4.00; or 1000 for $7.50. Your business card printed *free* at the bottom of the front page on all orders for 100 or more copies. Send all orders to the office of the American Bee Journal.

Some Facts About Honey and Bees.—This is the subject of an article written by Mr. J. E. Johnson, and published on pages 581-82 of the American Bee Journal for Aug. 25, 1904. We have republished it in 4-page leaflet form for general distribution, and furnish it, postpaid, at 35 cents per 100 copies. Send all orders to the office of the American Bee Journal.

Opinions ✣ of Some Experts

Spring and Fall Price of a Colony of Bees

Ques. 24—*What do you consider a fair price for an average colony of bees in a good, 8-frame Langstroth hive, (or a hive of about the same capacity)—(a) In the spring? (b) In the fall?*

C. H. Dibbern (Ill.)—a. $5. b. $4.

R. L. Taylor (Mich.)—a. $5. b. $4.

Rev. M. Mahin (Ind.)—a. $10. b. $5.

Adrian Getaz (Tenn.)—a. $4. b. $3.

L. Stachelhausen (Tex.)—a. $3. b. $2.

Eugene Secor (Iowa)—a. $5. b. $2.50.

Wm. McEvoy (Ont.)—a. $3.50. b. $2.50.

Morgan Bros. (S. Dak.)—a. $5. b. $3.50.

E. E. Hasty (Ohio)—This can only be an approximation. a. $5. b. $4.

Jas. A. Stone (Ill.)—a. Italians, $7; blacks, $5. b. Italians, $6; blacks, $4.

S. T. Pettit (Ont.)—a and b. Whatever it will bring when placed upon the market.

N. E. France (Wis.)—a. $3.50 to $4.50. b. $2 to $3. In Wisconsin this is what they sell for.

G. M. Doolittle (N. Y.)—a. $3 to $6, according to the strain or "breed" of the bees. b. $2 to $5.

Dr. J. P. H. Brown (Ga.)—a and b. From $5 to $8, depending upon locality and upon supply and demand.

Arthur C. Miller (R. I.)—a. $7. b. $3 to $5, depending upon condition. Fall condition is more vital than that of spring.

Prof. A. J. Cook (Calif.)—a. In the spring, $5. b. In the autumn little if any less, as bees always winter here, if they are healthy and have food.

J. H. Hambaugh (Calif.)—This is a hard question to answer. There are so many varied conditions. All the way from $5 per colony down to $2.

R. C. Aikin (Colo.)—a. $4. b. $3. These prices are based on common financial ideas and practices. On a true moral basis they should be twice that.

Mrs. J. M. Null (Mo.)—a. $5. b. $3. I infer for the purpose of stocking is what the value is based upon. These figures might be reversed if value of honey is to be considered.

E. D. Townsend (Mich.)—Supposing the hive that contains the colony to be worth $1—a. $4. b. $3. This is about what they can be bought for. I do not know what they are *worth*.

Dr. C. C. Miller (Ill.)—I don't know. It's like other things, a variable quantity, depending upon supply and demand, varying in different years and places from (a) $2 to $10. b. 0 to $6.

C. P. Dadant (Ill.)—a and b. I would not answer in dollars and cents because so much depends upon circumstances, but if I were to buy, I would pay 25 percent more in the spring than in the fall.

O. O. Poppleton (Fla.)—From $3 to $5, but this depends much upon locality, etc. They would usually be worth at least a dollar more in the spring than in the fall, but it is difficult to fix any standard price.

C. Davenport (Minn.)—a. and b. My prices vary according to how bees winter and come through the spring. But, as a rule, I consider an average colony worth a third more in late spring than the previous fall.

J. A. Green (Colo.)—It will depend largely upon circumstances. a. $3 to $5. b. About 50 cents less. In a locality where wintering losses are apt to be heavy, the spring value might easily be a half more than the fall value.

P. H. Elwood (N. Y.)—Bees in box-hives, $2 in fall; $3 in spring. Add price or value to you of hive with super and foundation, if any. If you are using or selling to a man who uses Langstroth hives, $5 would be a fair price or value from cost standpoint. However, bees are usually sold below cost, as is much of the honey also.

G. W. Demaree (Ky.)—a and b. This is a question hard to answer satisfactorily. The price of honey-bees is governed by the laws of supply and demand as much so and more than most salable products. Bees sell in my locality at farm sales (10-frame hives) in springtime at from $2 to $3 per hive; and at least 25 percent less in the fall.

E. S. Lovesy (Utah)—a. That depends largely upon existing conditions, and as the indications for a good honey crop, owing to the heavy snow fall, are above the average in the greater portion of this State, I would consider $4 a reasonable price for a single-story colony, or $6 for a 2-story one. b. The value would be at least one-third less.

E. Whitcomb (Nebr.)—a. and b. That depends entirely upon how many bees there are in the hive, how much honey they have on hand, kind and breeding of the queen, and her age, etc. It is as impossible to fix the price of a colony of bees for different localities of the United States as it would be to fix the price of a pound of fresh fish or a dozen clams.

✣ Contributed ✣ Special Articles

Making a Honey Market—Retailing Honey

BY C. P. DADANT.

When so many apiarists are asking themselves what to do to dispose of their honey, it may not be amiss to examine what is done in other countries. The following statement taken from the Swiss Bulletin de la Societe Romande d'Apiculture for December, 1904, will probably be read with interest:

To produce hundreds upon hundreds of pounds of honey is very nice and very good. But we must dispose of it in some way. To-day our members are relieved of the anxiety; in fact, for a few years past our section of the Neuchatel Association busies itself actively with the disposal of our crop.

When fall comes we keep a "honey market" in the city of Neuchatel; some years, if the fruit crop has failed, the "market" is held in September, and if the abundance of honey permits of it the "market" is renewed in December. This year the stone-fruits having been plentiful, we have preferred to hold the "market" in October.

A few insertions in the local papers, announcing the coming market, are published as early as September, to advise the housekeepers that they will be able to secure a supply of good honey for winter.

It is a pleasure to see the housewives come at the appointed date to have their pails and pots filled.

Allow me to give you a few details upon the organization of our market; the experience of some ten years has taught us how to manage its workings, and we are now well pleased with it.

We need first to secure a building sufficiently large to accommodate the handling of the stock on hand, and another in which the sale may be carried on, so as not to be obstructed by the clients. The Association in this matter is very much favored by a friend of our beekeepers, who rents to us obligingly some very good rooms in a central part of the city, and in close proximity to the vegetable market.

The day preceding the sale we receive the honey of the members. The members of the honey-market committee weigh the pails brought and verify the contents, which must be liquid and free from impurities. Then they proceed to the putting up in tins containing 1, 2, 4, 5 and 10 pounds, and on each tin is gummed the label of the Association. During the two days of the honey-market we also make an open sale—that is, we fill any and all receptacles brought by purchasers for that object. A large tank containing 450 pounds, put up on a stand and supplied with a faucet of large size, gives excellent service. The handling of the honey is much facilitated by this tank, which we did not have at the outset. The unsold honey is afterwards put up in tins of different sizes, and with guarantee labels over the cover and deposited in our three agencies in the city, these taking charge of the sale thereafter for a commission of 10 percent. The empty pails are weighed and returned to their several owners. The cashier balances up the accounts and makes a first distribution of cash during December; the balance is paid after the agents have concluded their sales.

The organizing of such a "market" as we keep requires a mutual understanding and some good-will on the part of the producers and of the salesmen. The task of the cashier or treasurer is often difficult, and yet, in spite of the imperfections of our methods, we are usually rewarded for our trouble by a large sale of honey. The prices, of course, have quite an influence on the amount which may be sold during the two days of the "market." During the years when honey is cheap we see among our customers many working people who desire to become acquainted with the taste of honey, while, on the other hand, this year, for instance, as the honey had to be sold at 20 cents per pound, we have not been able to take advantage of the custom of the small purses who consider honey at this price as a luxury, which must not be consumed unless sickness demands it. It is to be regretted that we must raise the prices at times, for the production is ever on the increase, and we must increase the demand also. Yet I would not wish to be understood as being in favor of lowering prices too much—that is, I do not wish to see the Associations sell at a price below 16 cents—it would be a mistake, because the expense incurred in organizing the market causes a reduction of 2 to 3 cents per pound on the returns to the producer.

Let us, however, not forget the useful side of this market, which is causing good honey to be more and more known and appreciated in all classes of society. The beginning is often difficult; the public does not come at once, but by renewing this annual advertisement—this method of popularizing the consumption of honey—we slowly create a good clientele that will remain faithful to the Association, and will return annually to the honey market. E. Bonhote.

It is, of course, more difficult to follow this method in a sparsely settled country like the United States than in Switzerland, where honey-producers are in great numbers, but not extensively, engaged in bee-culture. But I believe there are some hints in the doings of Europeans. There are many things in which we could imitate them. For instance, their street fairs in small cities twice or three times a year, are the means of helping trades and purchases of all kinds. Whoever wants to buy a horse, a cow, or sell one, goes to the street fair and is sure to find all sorts of bargains. So it might be with honey-sales. If local bee-associations in the neighborhood of large centers would take advantage of the cheapest means of advertising, and let the people know that good honey—honey known to be pure, and guaranteed by their local association—would be offered for sale on certain days at certain points, there would probably be enough sale and enough additional advertising in those "markets" to prove very beneficial to the fraternity. Many people hesitate to buy honey because they fear adulteration, and many of these would probably go readily to get their supply from a local association that was known to represent the honest producer of pure honey.

Is not this matter worth considering?

Hancock Co., Ill.

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Shaking of Bees for Comb-Honey Production Without Any Increase

BY L. STACHELHAUSEN.

On page 19 I find an editorial note saying that the plan for making shaken swarms is at least 39 years old. There has been a general misunderstanding in this respect for about five years, when the making of shook swarms commenced to receive the attention of American bee-keepers.

The plan of making artificial swarms by shaking or brushing the bees off of the combs is nearly as old as the movable comb itself. I have made such swarms ever since I commenced bee-keeping, 38 years ago, and saw other bee-keepers make them some years before that. It is the same thing as the driving of swarms from a straw-hive, which has probably been known and practiced for 200 years. Even the plan to make three colonies out of two is very old.

Of newer date are only some modifications. It was the rule that a shaken, brushed or driven swarm should be put on the old stand to get all the field-bees. C. J. H. Gravenhorst, in Germany, about 1878, was the first who explained how to operate when the shaken swarm should be put on a new stand.

So far the purpose of shaking was increase. I believe I was the first one to use this manipulation for any other purpose.

Since 1880 I have been keeping bees here in Texas, and I used at first the 10-frame Langstroth hive, but later a still larger one. I soon found that these large hives are favorable for spring development, but not practical for comb-honey production, while swarms, natural or shaken—especially if they are very strong and hived on starters only—had always given a good crop of comb honey.

There was only one thing I did not like—such swarms were getting weaker all the time during the first 21 days, because no young bees were gnawing out of the cells; the brood in the swarm was increasing, and more bees were necessary to nurse this brood. This, again, causes a diminishing of the field-force at a time when a large force is most needed. If the bees which are reared in the parent colony could be given to the swarm at the right time, we could have the field-force as in an undivided colony.

Heddon's method of preventing afterswarms had given me the idea how to secure this. I put the shaken or natural swarm on the old stand, and the parent colony close by its side; 10 days afterward the most bees of the old hive were shaken in front of the swarm and the queen-cells cut out; and 21 days after the swarm was made all the bees of the parent colony were united with the swarm. There is no increase and no interruption in breeding. I used this plan about 8 years ago, and as I found it a success I published it in Gleanings. Nobody mentioned it till about a year afterward, when E. R. Root brought it more prominently before the bee-keeping public. Now, from several sides we hear: "That is old; somebody made shaken swarms some years ago." But the shaken swarm is only a part of my plan, and can just as well be a natural swarm.

The whole thing is very simple, and it is very probable that some used a similar plan at the same time or before I did, but it was not published before I mentioned my plan in December, 1899, and before I described it in Gleanings (1900, page 840). I know of one such plan—that is, the parent hive is set on top of the swarm and a connection is made by a channel or otherwise from the upper alighting-hole down to the lower one, so that every bee that flies out from the upper hive will, after returning, unite with the swarm.

I claim to be the first one who used a plan to unite all the bees from the parent colony at the proper time with the shaken or natural swarm, and in this connection used a new management for comb-honey production, gaining the advantage of large hives during spring development, and of small hives during the honey-flow. Bexar Co., Tex.

Convention Proceedings

Report of the Wisconsin Convention.

(Continued from page 231.)

The convention took up the question of affiliated bee-keepers' societies in Wisconsin with the State Association, and a committee was appointed to consider the subject.

Mr. F. Wilcox was recommended for judge of the apiarian exhibit at the next State Fair.

C. Spangenburg exhibited a single-comb honey-extractor which cost 35 cents. He made it himself. It consisted of a handle or pole about 4 feet long, around which swung a wooden half-cylinder about 20 inches long, in which was supported a flat wire-cloth whereon was laid the comb of honey to be extracted. This half-cylinder was attached at each end of it to the pole by means of metal rings, and the whole thing was swung around the pole by a peculiar movement of the hand at its top, the lower end of the pole having a sharp point, which was supposed to drop into a small round hole in the floor. It is an ingenious invention, but hardly practical for the specialist bee-keeper!

The first thing at the morning session of the second day was the election of officers, which resulted as follows: President, N. E. France; Vice-President, Jacob Huffman; Secretary, Gus Dittmer, of Augusta; and Treasurer, F. Wilcox.

It was reported that at the last Minnesota State Fair there were 152 entries in the apiarian department, for which $408 in cash premiums was offered. Wisconsin offered a total of only $97 at its last Fair. A committee of three was ordered on State Fair Apiarian Exhibits, consisting of Pres. France, and Messrs. Putnam and Wilcox, with instructions to endeavor to secure, if possible, for the Wisconsin State Fair, a premium list similar to that of Minnesota.

Mrs. Millie Honaker read the only paper of the convention, on the subject, "Who Is, and Who Will Make, a Successful Bee-Keeper." It was an excellent paper.

Practically all of the time of the convention was devoted to the discussion of questions, which is fast becoming the popular kind of program for bee-keepers' conventions.

In reply to the question about emptying barrels of granulated honey, it was advised first to lay a sheet of zinc or heavy paper on the floor, on which place the barrel, and then remove all of the barrel except the lower head. The honey can then be shoveled into any large receptacle for melting.

Experience was called for as to feeding syrup and water in the spring, in the open, for stimulating brood-rearing. It was suggested that it might cause robbing. Some one advised putting combs of honey or syrup in empty hives where bees can get at them. This was found to work well.

For late feeding it was suggested that by elevating the front of the hive a little the feed could be poured in at the entrance on the bottom-board. This was found to work all right, giving the feed in the evening, as the bees would have it all carried up by morning. That is, provided the nights were not too cold. One pint, or even half a pint, at a feeding was mentioned.

Do bees winter well on buckwheat honey? Yes.

Is an absorbent on top of the hive necessary for safe wintering? Yes, especially outdoors.

Does not the lack of a fall honey-flow account for the loss of bees in winter? Yes, even if the bees are fed for winter stores.

Which is the better for marketing dark extracted honey—barrels or cans? Barrels for manufacturers, and cans for retailing to families.

Should Wisconsin establish an Apiarian Experiment Station? Yes.

As to putting bees out of the cellar at night or in the daytime, 15 voted for the day and 4 for the night.

As to using full sheets of foundation in the sections, some suggested that it caused a midrib in the honey, and interfered with its sale. Some thought that the foundation sometimes used was too thick, and that the very thinnest should be put in sections.

Can foul brood be carried by queens in the mails? Yes, and no. Not by the queen, but by the honey in the cage. It was advised to throw away the cage in which the queen arrived, transferring her into a new cage in which to introduce her.

Would you recommend feeding artificial pollen in the spring? Yes, if there was no natural pollen when needed.

What is the condition of foul brood throughout the State of Wisconsin? Pres. France reported that there was still some in perhaps 4 or 5 counties. If its importation from other States could be prohibited it would very soon be all wiped out. A vote of thanks was tendered Pres. France for his good work as State Inspector of Apiaries.

How do you free melted honey from air-bubbles? Let it stand a while after bottling.

What is the best kind of soil in which to build a bee-cellar? It depends upon the location. A cellar in sandy soil will winter bees best.

The convention adjourned to meet in 1906 at the call of the Executive Committee.

Our ✣ Sister Bee-Keepers

Conducted by Emma M. Wilson, Marengo, Ill.

Bees Gathering Honey—Destroyer for Black Ants

I enclose a picture of my apiary and home, taken by myself. It is not a very good one, as I am not experienced in the work.

APIARY OF MRS. M. WATSON, OF MERCED CO., CALIF.

The weather here is beautiful now. The almond trees are in bloom, and the fruit-trees soon will be. Bees are gathering some honey, and we hope to have a good season.

Can you give me, through the American Bee Journal, the remedy for destroying those little black ants that are in and around the bee-hives? I saw it in this paper last spring, but lost it, and have forgotten what it was.

Merced Co., Calif., Feb. 7. Mrs. M. Watson.

I think perhaps this is the item you refer to on page 99, 1904:

"Mr. H. Potter, in the British Bee Journal, gives his method of getting rid of ants:

"I mixed some bee-candy with arsenic, and put it under the hive, placing a piece of perforated zinc over the candy, and a small box over all, to make sure that the bees could not get at it. The effect was surprising! On the first day the candy was black with ants; the second day only 2 or 3 to be seen; third day ants all gone. I have had no more trouble with them this season. Ants eat their dead, and therefore a wholesale poisoning had been set up by them devouring their dead comrades."

The perforated zinc mentioned must have had smaller perforations than the ordinary perforated zinc. Small enough not to allow the bees to pass through, while the ants could.

Thank you for the beautiful picture. I hope it may be printed in the Journal so the other sisters may enjoy it.

Feeding—Bees Loafing—Starters—Color of Drones—Comb Honey Management, Etc.

1. Is there a limit to the number of questions one person may ask in a year? I hope not, for there are so many things I want to know, and the American Bee Journal is so full of good things.

2. It is fine, warm weather now after a very bad winter on other creatures—though perhaps not so hard on bees. Upon lifting the hives to-day I find one very light. The bees are flying a little, and there are many dead bees in front of each hive. I have put a super filled with unfinished sections upon the light hive. Is that a wise course?

3. Could bees be fed sugar syrup safely on warm, bright days from now on?

4. What do little crumbs of wax, light and dark in color, signify at this time of year at the entrance and on the alighting-board?

5. One of the great troubles I have with the bees is their loafing. They hang out in great clusters. If heat causes it I should think they could find nothing hotter than the bunches in which they arrange themselves. "A B C" says, "Never allow the bees to hang out," but I have been unable to prevent it. Giving more air and more super-room doesn't seem to be sufficient. What can you suggest as cause and cure?

6. Do you consider it wise to put starters in the sections on all four sides, or only top and bottom, and why?

7. Does any one know with certainty the relative yield of comb and extracted honey under *just* the same conditions?

8. I notice in the summer a change in the color of drones. Last season they were yellow and glossy early, but by August they were much darker, and some seemed nearly all black. What does that indicate?

9. What are bees doing when they stand for a long while with wings moving rapidly and abdomen erect, about

the entrance of the hive and even up on the front?

10. Starting this season with 6 or 7 colonies, how would you manage them to secure the most comb honey—natural swarms or artificial, or no swarms at all, as far as possible?

11. I should like to increase as much as possible and not interfere with the honey crop. Do you advise putting on a brood-chamber first with full sheets of comb to get them used to working up there?

12. An article, or series of articles, on the meaning and significance of various indications and signs—in other words, the ways in which you judge of conditions in the hive throughout the season, would be most helpful to beginners like myself. I am always encountering some condition which I am unable to translate into simple English language.

13. During the early season and swarming time how often is it wise to look through the hives?

14. Does it do any harm to look too often? Does it disturb the bees or interfere seriously with their work?

Clark Co., Kans., Feb. 24. HELEN PERRY.

1. The limitations as to questions do not come from their number but from their character. Any number of questions connected with bee-keeping may be asked, provided they are not already answered in the text-books, or books of instruction about bees. The intelligent beginner—and, for that matter, long after she has graduated from the class of beginners—will always find plenty of questions not answered in the books; and in such cases the bee-paper is needed to help out. No one who has faithfully studied her bee-book need be afraid of asking too many questions.

2. Yes, provided you are sure the bees reach the sections. If put on when very cold, it would be of no use till a day came warm enough for the bees to move freely.

3. Y—es, provided you can count on their flying every few days. In other words, it is not best till winter is well over.

4. Chiefly cappings that the bees have gnawed from the sealed honey.

5. The advice of "A B C" might be amended: "Never let bees hang out when there is plenty to do in the field." Nothing strange a strong colony should like to sit outside to gossip after the close of a hard day's work; but it isn't good form in the middle of the day, *if* there is any work to be done in the field. When there is nothing to be had in the field, the wise little creatures do well not to use up their strength going a-field for nothing, and then they may be expected to cluster outside. But when there is a good honey-flow on, ventilation and super-room *enough* ought to prevent loafing except with a colony contemplating immediate swarming or disgruntled in some other way.

6. With starters top and bottom, with only an eighth or a quarter of an inch between, and a space of same kind at each side, the bees will build to the sides of their own accord.

7. No; and if you should find out the right answer for a certain condition, the answer might be quite different for some other condition.

8. Possibly, like workers, they may grow darker with age on account of loss of plumage; possibly the later drones may have been from darker colonies; possibly (if you will pardon the suggestion) your memory for colors may have been a little at fault.

9. Just the same that you might be doing on a hot day, fanning. Not exactly to cool their faces, however, but to cool the hive. Other bees inside the hive are similarly engaged, making a well-planned system of ventilation.

10. No swarms at all where the principal gathering comes early; increasing to 50 or 100 percent if there are heavy fall flows. I would have to eat and sleep at your house several days before deciding whether natural or artificial swarms would be best for you.

11. No; their habits are all right in advance.

12. Doubtful whether any general rules could be framed except such as are already in the text-books. Those of us who have been longer at the business probably do not know so much about bees as you give us credit for. If we could only keep quiet all the time we might keep up the delusion, but some question is sure to be asked sooner or later to expose our ignorance.

13. That depends upon management; "in this locality" about once in 10 days with any colony in danger of swarming.

14. The disturbance of opening a hive must interfere at least a little with the labor of the bees, and should occur only when the benefit resulting overbalances the interference.

OUR TOIL DOTH SWEETEN OTHERS

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

THE PRESENT PRICES OF BEE-SUPPLIES.

Doubtless most of the brethren want the price of sections lower, but I do not. I think the current price is low enough. This is not because I sell the wood again for more than I gave for it, but for other reasons. (In my retail sales I make an allowance for the weight of the wood to my customers.) Crowds of people, otherwise good and sensible, would—if court-houses were selling at 50 cents a dozen—would want to get them at 48½. This disposition to *squeeze*—squeeze everybody and everything, without regard to how unjust or cruel it may be—is one of the awful iniquities of human nature. As followers of the Christ of Bethlehem, it is our duty to combat this iniquity—combat it in ourselves first of all, and also in the great, great world—combat it just the same even if it does look like trying to regulate the level of Lake Michigan with a teaspoon. More of the spirit of Christ! And if that sounds too pious for average ears, more of the spirit of "Live and let live!" Murder and "Business" are old pals. Unless we have to take that back and say, Murder and Business are two names for the same old Thug.

When it comes to hives I think a little differently (but without any great vehemence or bitterness.) Mainly the hive-makers' own affair. Still, my private feeling is that a well-ordered, 20th century factory should be ashamed of itself if a single individual, without a bit of machinery, can make his own hives and make more than wages at it. Such a fact rather "gives 'em away."

But all the above is rather like obscuring the real matter with smoke. Also the real matter itself is rather complex, and needs *clear* thinking, if we are to feel just right about it. And this is so important that it will do us no harm to remember an old saying: "Clear thinking is a prerogative of God alone." If we realize a *little* how difficult clear thinking is, we shall be less liable to get 10,000 miles away from it—and be bragging about our clear thinking at the same time. Here are some things which clear thinking probably ought not to forget—some links that belong somewhere in the logical chain:

(Link A.)—The heart of this mighty nation has enlisted in a campaign against a great and real evil—difficult campaign, needing all possible forces. Shall we fail to drop into the righteous current? Shall we fail to push when all honest folks are pushing—and then save our credit by great ado some time when nobody else is pushing at all—or by standing off and saying proudly, "I am a well-wisher to this pushing, just the same as you?"

(Link B.)—One man excitedly makes a lot of objections—because he loves the cause, and wants to save it from a mistake. Another man does the same because he hates the cause and *wants to run it into a mistake.* Another man (fit hardly for loving or hating) objects because he is got up that way—always does it. One needs care in estimating these three men. Also, one man forbears all objections because (in his superficial thinking) he thinks things are all just right. Another man forbears because he sees the criticism business so terribly overdone that he fears the wisest protests, under the circumstances, would be more likely to hinder the cause than help it. Another man forbears because he always revolves around his own feelings—his own *enjoyment* of a rumpus. Objections break in on the fun; and his enthusiastic nature is never happy unless he is running over like a bottle of bees. One needs care in estimating these three men, too. But *somehow* every good man ought to be ready with his influence when the tide is right.

(Link C.)—Bee-keepers incline to consider themselves a select body of men. Is it not true, to a considerable extent, that they are? Neither the drinking, nor the smoking, nor the swearing about a bee-convention that there is about certain political conentions. I'm just now thinking about a hotel-keeper who passed the cigars to an important bee-committee—and not a man used cigars! Such a body of men should not complain that too high a level of commercial morals is urged upon them. Unless they have been badly led they will not, I think—not even if we say, Let wages and prices, and manufactures and profits, be adjusted as the same would be between a dozen brothers living on a far-distant island. Absolute monarchy—with a common-sense, Christian public opinion for monarch.

(Link D.)—There are certain men, often wealthy, who make it their business to purvey to the wants of other men. If some of these choose for their lot in life ministering to a superior class of men, it should not surprise them if they should run against *accountability* somewhat greater than inferior grades of men usually insist on. Certainly if they have ignored rules of decency made by the non-select world, they are not to be surprised if their own constituency warm their ears pretty well about it—and often, and long.

(Link E.)—There are certain doings and arrangements very common in recent years, repeated over and over again in almost every possible field—very capable of being beneficent, but practically almost always the opposite of beneficent—that the world has at last got up arms against. High time. Touch pitch—and be defiled. Get up trust—and brick-bats begin to come your way—if not striped clothing. No use to tell us that the Meat Trust of Utopia is a perfectly lovely institution, which blesses all concerned, and gives the people the cheapest possible meat. We know that. We also know that the Meat Trust of the United States is a gang of high-handed and abominable robbers—robbers that rob those who raise the cattle on the one hand, and rob those who eat the meat on the other hand—robbers that fix prices—and fix them not on reason, nor right, nor natural laws, but on a *fiat* as impudent as the Czar's. Most other trusts differ only in *degree*. By the way, there isn't any Meat Trust. We know that. And we are ready, and waiting to hear, that there isn't any trust among bee-manufacturers. It is one of the commonest characteristics of this particular evil genus to deny their own existence. When the dog howls all night it means, in dog language, "There are no such things as dogs."

We must be getting almost ready now to put things together. We were startled awhile ago to learn that those who wrote to different firms for prices on lots of bee-supplies got in reply IDENTICAL FIGURES! *Ecce Rex!* There she am! No more to be said. No place for argument. No place for anything but the searching question, What are we going to do about it? What—*if anything?* Sad that a "decent regard for the opinions of mankind" did not keep our purveyors from this step—but it did not, it seems. Sad that it did not occur to them: We serve a select body of men; we should therefore be a little select in our methods. We did think that there were men among them that were willing to stand in the blaze of publicity as *model* men. We thought that some of them shrank from appearances of evil—shrank from them personally, and, more than that, shrank from them in a Christian sort of way—seeing we are taught to avoid the appearance of evil. That we were mistaken in this came to us as a sorrow and a blow. They are willing, it seems, for some prospective profits (when profits were already good) to take a position which necessarily renders them a sort of stench in the nostrils of mankind. Sorry! Very sorry! If we had not greater things to be sorry for we should be sorry that they threw away such an opportunity as they had—the opportunity of illustrating to the bigger bears how a spirit of live and let live, resting on the public sentiment and public reasonableness of an enlightened patronage *can* make it unnecessary to form a trust. *Well, the onus of the whole thing is not that certain goods may be offered to us a little too high.* That's not it. Scotch that false idea whenever it pops up. It's the discovery of a yoke for our necks that we didn't know of before. It's the compulsory facing of the problem: Shall we go quietly on in a sort of semi-bondage, or shall we do something about it and break the bonds?—and shall the State Seal of Virginia furnish us with the model for a tableau? On one thing I shouldn't wonder if we were already near unanimity. It's well settled that "Faithful are the wounds of a friend"—we'll make them realize what an awful lot of friends they have, and what phenomenally faithful friends they be.

E. E. HASTY.

[The foregoing was really intended as a private letter to us, but we have Mr. Hasty's permission to publish it.—EDITOR.]

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. MILLER, Marengo, Ill.

Management with a Queenless Colony

1. I have a queenless colony. I took a frame of brood and eggs from another colony and gave to it. The bees will rear another queen, I suppose, but she can not be fertilized now, and what will be the result?

2. How would you manage a queenless colony at this time of year, when no queens are to be had?

MISSOURI.

ANSWERS.—1. To answer your question in very few words, any queen reared from brood given before the middle of March, as far north as central Missouri, will in 9 cases out of 10 be only a damage.

2. One way is to give it a queen as early as you can buy one. Another, and perhaps a better, is to distribute its bees and combs among other colonies.

Italianizing Bees

I have 4 colonies of brown bees which I wish to Italianize the coming season.

1. When is the best time to introduce the new queens? Should it not be early enough to secure Italian drones?

2. When I remove the old queens can I not also remove a frame of brood, honey and bees with her to an empty hive, forming a nucleus? Then if anything happened to a new queen I could return the old one again. Would not the nucleus keep growing until I could later in the season requeen with an Italian queen, or cell reared from the new queens, thus utilizing the brown queens during the breeding season, to some extent?

NEW YORKER.

ANSWERS.—1. It would be a nice thing to have the new queens installed very early; yet on the whole it is an open question whether it's best to get the queens early or later. Very early queens cost more, and there is more danger introducing than in harvest time. The drone part is not so important, for the probability is that your queens will mate with drones from surrounding apiaries.

2. Yes, your scheme is all right. And don't be worried if you don't get all Italian blood in one season. If you do it in 5 you'll do well.

Transferring Bees

I bought 10 colonies of bees in hives that are square. I want to transfer them into the regular-size frame hives.

Will it do simply to remove the combs from the old frames which would not fill the new frames in length, or would it be better to fill the new frames completely by cutting the pieces to fit?

MISSOURI.

ANSWER.—Better fill frames entirely; otherwise the bees will be likely to fill out with drone-comb. In cutting pieces to fill out, it may be convenient to remember that it is not really necessary to have them the same way up and down that they were.

Feeding Bees—Clipping Queens—Using Hives in Which Bees Died

1. Is it safe and right to feed bees honey that has soured?

2. So much is said about clipping queens in the spring that one might think that it had to be done for each colony every spring. Does not the clipped queen live for several years, as a rule?

3. When a colony is winter-killed, and the hive is filled with comb and considerable honey, can not the hive with its comb and honey be used to advantage for a new colony? If necessary to cleanse it, how should it be done?

4. Are all Italian bees "red clover" bees, or is there a distinct kind especially adapted to gathering honey from red clover?

NEW YORK.

ANSWERS.—1. Yes, if fed in the spring at a time when bees are flying daily, and at a time when there is no danger of its going into surplus.

2. Yes, but the safe way is to look for her each spring, or at least before swarming-time, lest she may have been superseded and a successor with whole wings be present. It sometimes happens that a queen is superseded before she is a year old.

3. Yes, indeed. Usually the bees will do the necessary cleansing, but you should brush out all the dead bees, and if any of the combs are very foul withhold them till after the bees have occupied the hive for a day or two, and give only one or two a day.

4. There's nothing very distinct about it. Bees that will work on red clover are called "red clover" bees, whether Italian or not.

Transferring Bees

Will you please tell me how to transfer bees from one hive to another? The hive they are in is poor, and I would like to get them into one with 9 frames.

ILLINOIS.

ANSWER.—Just exactly how it should be done, provided the bees are now in a frame hive, depends upon the size of the frame now in use compared with the one to which you wish to transfer them. If the frame is shallower than the old one, you will cut down the comb so as to make it the right depth. If the new frame is deeper, put the comb in, and then cut pieces to wedge in on top. Or, which may be more easily managed, turn the comb so the present top and bottom may be at the sides, and then cut the comb just deep enough to go in the frame. Before taking out the first frame from the old hive, have an empty frame ready for it. Lay some strings on a table or something of the kind, on these strings lay the empty frame, then after putting in the comb tie the strings. Of course the strings must be laid in such a way that they will be distributed along the length of the frame, perhaps 6 or more of them, each string independent of the others. When you take out the first frame, brush the bees from it before cutting, and put it in its hive after tying. Then move the old hive from the stand and put the new one in its place, and after that brush the bees into the new hive each time you take out another frame.

It is just possible that the old hive is a box-hive without any frames. In that case it may be better for you to wait till the bees swarm, hive the swarm in the new hive, then 21 days later cut the contents out of the old hive. In the meantime it will pay you big to buy a bee-book to tell you more about this and a whole lot of other things.

Keeping Bees on Shares

I have an opportunity to get some bees on shares. The other man is to furnish the hives, supers, and bees, and I am to furnish the sections and take care of them. They are in good condition. What proportion ought I to have?

IOWA.

ANSWER.—That's a very hard question to answer. If you are an expert with bees, giving them close attention, you ought to have a much larger share than the one who knows little about the business and does little at it. So your share may vary from ¼ to ¾. Generally speaking, keeping bees on shares is not the most satisfactory thing in the world.

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* * *

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4. A new subscriber must not be a member of the same family where the Bee Journal is being taken now. A new subscriber must be in fact a new reader.
5. Cash must accompany every order when sending in new subscriptions. And after any regular subscriber has sent in 5 new ones, he will say when sending in the sixth new one that he wishes to compete for a Cash Prize. Then we will enter his name on the Contestants' List. (If all is not now plain, please ask any questions and we will try to clear up anything that is not understood).

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1—11A5t

Reports and Experiences

Bees Doing Well—Closed End-Bars

The summer of 1904 was a pretty good one with bees in this locality. In 1903 I got a crop of only 400 pounds from 33 colonies, and half of it I had to feed back. This, with six previous years of poor crops, discouraged me. I did not give them the attention they ought to have had, and the consequence was that I lost until only 28 colonies were left. Eight of them were very weak, and it took all summer for them to build up. But I secured 1800 pounds of honey from the 20 that were in a better condition. I had taken care of one colony in first-class style, and secured from it 150 pounds of surplus, and had 35 pounds in the brood-nest, besides a great deal of pollen.

Last fall I provided each of them with about 30 pounds of honey, besides frames of pollen, and I set aside 80 frames of honey and

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a large beautiful Yellow Dent Corn with broad and deep yellow grains. The ears are also of good length and yield a big harvest. Try this new variety. Bushel shelled, $2.00; on ear, $3.00. We also offer standard sorts, per bu. shelled, bags included:

Barnard's Yellow Dent $1.75
Iowa Gold Mine - - 1.25
Iowa Silver Mine - - 1.25
Wisconsin White Dent 1.25

If you don't know just what you want, we will select a seed for you that will give perfect satisfaction. Write for free catalog, full of garden and field hints — worth sending for today.

W. W. Barnard & Co.
161 r, E. Kinzie St.
Chicago

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Southwestern Bee-keepers
SAVE MONEY

See our prices on all **BEE-KEEPERS' SUPPLIES** before you buy. Send for Catalog. We carry a full and complete line, will not be undersold, and will discount prices of any competitor.

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We represent the American Can Co. in Texas as their sole and exclusive agents for Honey-Cans. We also handle Dadant & Sons' world-famous Comb Foundation exclusively. Get our prices before buying.

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In any quantity at all seasons of the year. Let us quote you.

HONEY AND BEESWAX

Bought and sold. We will buy your honey-crop, and we especially want your beeswax at highest market prices.

THE GRAHAM-HYDE BEE CO.,
(H. H. HYDE, Successor)
1D9t SAN ANTONIO, TEXAS.

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Lewis' Goods at Factory Prices

Best shipping-point in United States.

Special inducements on Bee-Hives. 88-page Catalog—good information for all bee-keepers—free.

ASK ABOUT OUR FREE POCKET-MIRRORS.

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Is the fact that, after 20 years in the **SUPPLY BUSINESS**, the last year shows an increase of 33 percent over any previous year.
Is there any better proof than this, that we satisfy and please our customers?
We have the facilities, the experience, and just the kind of goods you want.
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Write for estimate and discounts. We can save you money. Send to-day for 1905 catalog.

JOSEPH NYSEWANDER Iowa Phone 968 565 & 567 W. 7th St. **Des Moines, Iowa**
845t—14E5t

Send for Our 1904 Catalog and Price-List.

OUR HIVES AND SECTIONS
Are Perfect in Workmanship and Material.

By sending in your order NOW, you will SAVE MONEY, and secure prompt shipment.

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PAGE & LYON MFG. CO., New London, Wis. U.S.A

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Root's Goods at Root's Prices

Everything used by Bee-Keepers.
POUDER'S HONEY-JARS. Prompt Service.
Low Freight Rates. ∴ ∴ ∴ Catalog Free.

One of those nice **FLEXIBLE BEE-HATS** included free with every shipment, if you will mention it when ordering, telling where you saw the offer.

WALTER S. POUDER,
513-515 Massachusetts Ave., INDIANAPOLIS, IND.

Please Mention the American Bee Journal when writing Advertisers

pollen for spring. They are all doing well now, and for the last 2 weeks have worked hard on willow, and have carried in a good deal of pollen. A full blossom is now appearing on early plum.

I notice there are some bee-keepers that have the preference I have for closed end-bars. I made 10 frames for a hive about 3 years ago—the common thick-top and ¾-inch bottom-bar with 7-16-inch thick and 1⅜-inch wide end-bar (closed end). I wish all my frames were of the same kind. If they are square and well put together there will be no propolis, and that means a good deal in this locality. It is not necessary to kill bees with them if they are rightly handled. All the frames which I make myself hereafter will be

DON'T BE BOTHERED
with lice on poultry. **Schild's Lightning Lice Killing Machine** instantly removes them from tiniest chick or fat gobbler. 3 sizes. Also Poultry Bits. Lice Murder, Lightning Lice Killing Powder, etc. Catalog free.
CHARLES SCHILD CO.,
801 Detroit St. Cleveland, O.
Please mention Bee Journal when writing

For Queens SEND TO **JOHN W. PHARR** **Berclair, Tex.**

He will furnish at same prices as last year: Tested, $1; Untested. 75c; 5 for $3.25; 10 for $6; 15 for $8.25; 25 for $12.50; 100 for $45. He breeds Goldens, Carniolans and 3-Band Italians. Also 1, 2, and 3 frame Nuclei, and full colonies. Prices given on application. Pharr pays the freight, and guarantees satisfaction on all Queens. To do justice and judgment is more acceptable with the Lord than sacrifice.—(Prov. 3: 21.) 6Atf
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850,000 GRAPE VINES
69 Varieties. Also Small Fruits, Trees, &c. Best rooted stock. Genuine, cheap. 2 sample vines mailed for 10c. Descriptive price-list free. **LEWIS ROESCH, FREDONIA, N.Y.**
Please mention Bee Journal when writing.

HONEY-JARS.

For a limited time we offer No. 25 Honey-Jars, porcelain cover, metal screw cap, holding one pound of honey net, one gross in case complete, in 5-gross lots, $4.00 per gross; less quantities, $4.50 per gross, f.o.b. New York. If you want to secure some, let us know at once.

HILDRETH & SEGELKEN,
265 & 267 GREENWICH ST., NEW YORK, N. Y.
11Atf Please mention the Bee Journal.

STANDARD
Poultry AND....
Bee SUPPLIES

The best of everything for the poultry and bee-keeper.

Freight Rates from TOLEDO are the Lowest

BIG DISCOUNTS FOR EARLY ORDERS.

Our 60-page Illustrated Catalog is out. Send for one. IT'S FREE.

GRIGGS ⁘ BROS.
521 Monroe Street,
TOLEDO, - OHIO.

Please mention Bee Journal when writing.

H. M. ARND, Manager.

Headquarters for
LEWIS' GOODS IN CHICAGO.

Best and Most Direct Shipping Point in the World.

Having decided to add Bee-Keepers' Supplies to our honey-business, we have arranged with the well-known **G. B. LEWIS CO.** to handle their full line of **Popular Beeware** in Chicago. We will sell at their regular prices.

Catalog and prices on Honey on application. If you want **Good Goods at Factory Prices and Prompt Shipment,** send your orders to the

YORK HONEY AND BEE SUPPLY CO.
(Not incorporated—Successors to The York Honey Co.)
H. M. ARND, Mgr. 141 & 143 Ontario Street, CHICAGO, ILL.

☞ Beeswax 28c cash, or 30c when taking Bee-Supplies in exchange—delivered here.

GOOD DISCOUNTS ON EARLY ORDERS
COMPLETE STOCK OF BEE SUPPLIES--LEWIS CO.'S AT FACTORY PRICES
MUTH SPECIAL HIVE THE BEST DOVE TAIL MADE
SEND FOR CATALOG.
WE ARE ALWAYS IN THE MARKET TO BUY HONEY--SUBMIT PRICE.
THE FRED W. MUTH CO.
51 WALNUT STREET, CINCINNATI, OHIO.

Wisconsin Basswood Sections
And Prompt Shipments
Is what we are making for our customers.
— **DOVETAILED HIVES AND SHIPPING-CASES** —
We carry a full line of SUPPLIES. Ask for Catalog.
THE MARSHFIELD MANUFACTURING CO., Marshfield, Wis.

Dittmer's Foundation is the Best.

Send for Catalog, Samples and Discounts, and judge for yourself. 1904 output, 50 percent increase over 1903.

Full line of SUPPLIES, wholesale and retail.

Working Wax into Foundation for Cash a Specialty.
E. GRAINGER & Co., Toronto, Ont., Sole Agents in Canada for Dittmer's Foundation.

GUS DITTMER, Augusta, Wis.

—FOR YOUR—
BEE-SUPPLIES, BERRY-BOXES & CRATES
—SEND TO THE—
Sheboygan Fruit-Box Co., Sheboygan, Wis.
LIBERAL DISCOUNTS on all orders till Jan. 1, 1905. 1A13t

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"DADANT'S FOUNDATION"
IT EXCELS.

WE GUARANTEE SATISFACTION.

BEE-SUPPLIES
OF ALL KINDS.

Beeswax Wanted at all Times.

DADANT & SONS, Hamilton, Ill.

made in this way, and as the price is 3 cents per frame very few will buy when they can make them.

In the spring I clean every hive, clipping all queens that have not already been clipped. I use the 10-frame dovetailed hive altogether.

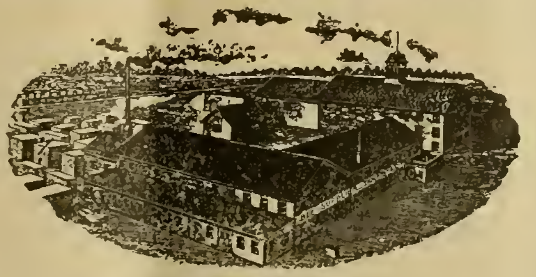
I have about 50 gallons of the 1800 pounds left, and put all my honey in ½-gallon Mason jars, which I sell at 60 cents, or 50 cents and jar returned. There is only 5¼ pounds in each jar, for they do not hold half a gallon, so the price is all right. O. K. RICE.

Wahkiakum Co., Wash., Feb. 6.

Rains in Southern California

This season will mark the turning point in the history of Southern California's great drouth.

Up to the present date here the precipitation has been over 20 inches, and rain is still



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Discount for Early Orders

We carry a large stock and greatest variety of everything needed in the Apiary, assuring BEST goods at the LOWEST prices, and prompt shipments. We want every bee-keeper to have our FREE ILLUSTRATED CATALOG, and read description of Alternating Hives, Massie Hives, etc. WRITE AT ONCE FOR CATALOG

AGENCIES.—Trester Supply Co., Lincoln, Neb.; Shugart & Ouren, Council Bluffs, Iowa; Fulton & Ford, Garden City, Kan.; I. H. Myers, Lamar, Colo.; Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex. KRETCHMER MFG. CO., Red Oak, Iowa.

DAVENPORT,
IOWA.
HEADQUARTERS FOR
G. B. Lewis Co's B-WARE,
Dadant's Foundation.

We can serve you quick and save you freight and express charges. Send us your BEESWAX in exchange for other goods. Send for our Catalog.
LOUIS HANSSEN'S SONS.

Fruitful Trees High in Quality Low in Price
Millions of Fruit and Forest Trees, Apples, Peaches, Cherries, Grapes and Strawberries, R. Mulberry and Black Locust Seedlings at special prices. Freight prepaid on $10 orders. Guaranteed to reach you fresh and bright. Don't miss our free catalogue.
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Box 646 Beatrice, Neb.
Please mention Bee Journal when writing.

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Those who have used our SUPPLIES are our best customers. They know from past experience that the quality of our goods is the equal of any in the market, and they are saving one-fourth of the cost.

Any purchase not absolutely satisfactory to you will be made so if you write us. This is fair. Let's have your order for this season's Bee-Supplies.

JOHN DOLL & SON,
Power Building, MINNEAPOLIS, MINN.

Sweet Clover Seed
FOR SALE
50 lbs. or over, at 5 cents per pound. Address,
5A9t JOSEPH SHAW, Strong City, Kans.

The ORMAS Incubators & Brooders
Low in price. Fully guaranteed.
Send for free catalogue.
BANTA MFG. CO., LIGONIER, INDIANA.

Send for Free Catalog

NORRIS & ANSPACH
LEWIS' GOODS IN KENTON, OHIO

We handle a most complete line of G. B. Lewis Co's goods at their regular factory prices. Dovetailed **HIVES, SECTIONS** (all kinds), **SMOKERS, VEILS**—in fact everything for the bee-keeper. Send 10 cents for **B-PRANKS**, an amusing and instructive little pamphlet, or, it will be sent free for the names and addresses of 6 bee keepers.

Lewis Makes the Finest Supplies—
We Sell Them.

Wholesale and Retail. **Send for Catalog.**
13Atf Please mention the Bee Journal.

Tested Queens by Return Mail,
—$1.00 Each—

We have a large number of Choice Tested Queens, reared last September and October, and wintered in 4-frame nuclei; these queens are vigorous and prolific, and of our fine strain of Three-Band Italians. Just the queens to build up weak colonies. Try them. Send for circular.

J. W. K. SHAW & CO.
13Atf LOREAUVILLE, Iberia Pa., LA.

WE SELL ROOT'S GOODS IN MICHIGAN
Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.
M. H. HUNT & SON,
BELL BRANCH, WAYNE CO., MICH

Golden Queens and Bees

Ready June 1. Hustlers for honey; very gentle, non-swarming. Price-list now ready—also an 8-page leaflet on queen-rearing, including my experience in curing pickled brood, black brood and bee-paralysis, sent free to all who apply.

HENRY ALLEY,
13Atf WENHAM, MASS.
Please mention Bee Journal when writing.

40-Page Catalog Free!

Full information regarding all kinds of BEE-KEEPERS' SUPPLIES. Best goods. Latest improvements. Danzenbaker Hives and Fixtures. Prompt shipments. JOHN NEBEL & SON SUPPLY Co., High Hill, Mo. 3Dtf
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The Rietsche Press

Made of artificial stone. Practically indestructible, and giving entirely satisfactory results. Comb foundation made easily and quickly at less than half the cost of buying from the dealers. Price of Press, $1.50—cash with order. Address,

ADRIAN GETAZ,
44At KNOXVILLE, TENN.

☞ J. G. Goodner, of this State, write me that he "prefer to pay $25 for a Rietsche Press than do without it."—A. G.
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87½ Percent Saved
In mortality to those insured in the
TOTAL ABSTINENCE DEPARTMENT
—OF—
Security Mutual Life Insurance Company
EACH POLICY HOLDER is entitled to a Bond issued by the National Total Abstinence League.
YOU may hold a policy and BOND.
General and special agents wanted. Address,
3D28t A. S. RENNIE, Mgr., 614 Marquette Bldg., Chicago, Ill.

MONDENG MFG. CO.

We are...... Manufacturers of Bee-Keepers' Supplies

Lowest Prices and Highest Quality. Our New Catalog just out. Write for it. Compare prices with others. 15 years' experience. Not in the Combination. Modern Machinery. Sections and Shipping-Cases by the car-load. Prompt shipments. Hives, Extractors, Feeders, and all Supplies used by bee-keepers. All goods guaranteed as per Catalog. **MONDENG MFG. CO.,**
147 and 149 Cedar Lake Road, MINNEAPOLIS, MINN.
7Dtf Please mention Bee Journal when writing.

falling daily. In many instances the rain has assumed torrential proportions, inundating and destroying much valuable property.

Wind has played havoc along the Ocean beach with breakwater piers, small ocean crafts, etc. With all this destruction, however, the good accomplished will be far in excess, and incomputable. We are now looking upon conditions favorable for both ranchmen and honey-producers. J. M. HAMBAUGH.
San Diego Co., Calif., March 20.

Great Rainfall in California

Great is our rainfall here, and almost as great is it in the lower counties of the State where dry years are common. The South has been having floods which have sent the rain-gauge higher than it has been for years. 'Tis well; crops will be good, and if everything goes well the honey crop will be the best in a long time. But it is too soon to "count one's chickens." Here we have a great season. The rains began in September; it has been raining a good portion of this month. Wild flowers as well as fruit-blossoms, to say nothing of garden flowers, are out in full swing. If it were not so wet the bees would have a feast galore. They work between showers, however. I notice that they have not increased as fast as might have been expected. W. A. PRYAL.
San Francisco Co., Calif., March 20.

Bees Still in the Cellar

Our bees are not out of the cellar yet. There have been quite a good many days when they could fly, but others when they were better off inside. It remains quite cool and cloudy. EUGENE SECOR.
Winnebago Co., Iowa, March 20.

Fruit-Trees Beginning to Bloom

Bees are working finely here. Peaches and plums are beginning to bloom.
P. T. LEMASTER.
Spartanburg Co., S. C., March 11.

WANTED—FIFTY 3-FRAME NUCLEI
Best Italian, with queens, in 10-frame single-walled hives—hives to be complete, super ship flat, including honey-boards, f.o.b. New York for Porto Rico, by July 15th. Terms cash. Best offer from reliable house will be considered. Please address,
MANES & SIEBERT,
13A1t SAN GERMAN, PORTO RICO.

With tears of sweetest joy,
That nothing can alloy,
I arise to say that
(Excuse this shabby hat)
DOOLITTLE
Has worked so very hard
That he has got a "pard"
To help him with his bees,
And if you wish to please

yourself and us, send for a circular giving particulars regarding our fine
ITALIAN QUEENS.
Prices for Queens this season will be as follows:

	1	3
Untested	$1.00	$2.25
Tested..........	1.25	3.00
Select Tested ..	1.50	4 00
Select Tested (1904 rearing) ..	2.50	....
Select Breeding	5.00	....
Extra Select Breeding	10.00	....

Prices quoted by the dozen or hundred.
Doolittle & Clark,
11Dtf Borodino, Onondaga Co., N. Y.

March 1st to April 15th
2 percent Discount.
Dovetailed Hives from Michigan White Pine, $1.25 each, 1½-story for comb honey. Address,
The Wood Bee-Hive and Box Co.
10Atf LANSING, MICH.

Bee Supplies

Guaranteed Superiority!

Lowest Prices

We have been making Bee-Hives, Sections, etc., for over 20 years.

New .. Illustrated .. Catalog free; also sample copy of

The American Bee-Keeper

(Monthly, 50 cts. a Year.)

The best magazine for beginners. (It has been published by us regularly for 15 years.)

Address,

THE W. T. FALCONER MFG. CO.,

JAMESTOWN, N. Y.

CONVENTION NOTICES.

Illinois.—The Western Illinois Bee-Keepers' Association will hold its spring meeting April 5, in the County Court Room, in Galesburg. Seasonable subjects will be discussed. Each meeting so far has been more interesting than the previous one, and we hope to continue that way. We earnestly invite all who are interested in this industry who are within easy reach of Galesburg, to be at this meeting.

E. D. Woods, Sec.

Texas.—The North Texas Bee Keepers' Association meets at Blossom, Texas, April 5 and 6, 1905. We are expecting a good attendance and a very profitable meeting. We earnestly invite all who are interested to attend.

J. M. Hagood, Pres. I. N. Hunter, Sec.

Michigan.—The Northern Michigan Bee-Keepers' Association will meet in Lady Maccabees Hall, at Central Lake, Wednesday and Thursday, April 5 and 6, 1905. Hotel rates will be, The Tavern, $1.50 per day. Editors A. I. Root and W. Z. Hutchinson will be present; also E. D. Townsend, Geo. E. Hilton and a number of other practical apiarists of Northern Michigan. If you have never attended a convention let us suggest that you try it for once, and you will have a higher opinion of your calling when you leave.

W. Mohrmann, Sec.

Geo. H. Kirkpatrick, Pres.

Utah.—The Utah Bee-Keepers' Association will hold its spring convention in the Mayor's Office, City and County Building, April 7, at 10 a.m. All are invited. Matters of great interest to bee-keepers, and horticulturists will be considered. Cache Valley's experience of killing the bees by poison spraying in the bloom must not be repeated. Jot down your thoughts on this or any other question, and bring or mail the same.

G. E. Garrett, Sec.

E. S. Lovesy, Pres.

HONEY AND BEESWAX

When consigning, buying or selling, consult

R. A. BURNETT & CO.,

199 South Water St. Chicago, Ill.

FOR SALE

The apiary of the late Charles B. Achard, is for sale in Rochelle, Du Page Co., Ill. It contains 11 colonies, 30 complete Danzenbaker hives (15 of them unused), tools, sections, foundation, etc. Inquire of

MISS A. M. ACHARD, Rochelle, Ill.

13A4t Please mention the Bee Journal.

Headquarters for Bee-Supplies

ROOT'S GOODS

At Root's Factory Prices

COMPLETE STOCK FOR 1905 NOW ON HAND.
FREIGHT RATES FROM CINCINNATI ARE THE LOWEST,
ESPECIALLY FOR THE SOUTH,
AS ALL FREIGHT
NOW GOES THROUGH CINCINNATI.

Prompt Service is what I practice.
Satisfaction guaranteed.
You will save money buying from me. Catalog mailed Free.
Send for same.
Discounts allowed on early orders. Take advantage by ordering now.

Book orders for GOLDEN ITALIANS, RED CLOVERS and CARNIOLAN QUEENS.

☞ For prices refer to my Catalog.

C. H. W. WEBER CINCINNATI ...OHIO...

Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

Honey and Beeswax

Chicago, March 8.—There has been somewhat of an increase in the number of sales during the past 4 weeks, yet the volume has not been large, while prices are if anything lower than in January, especially on other grades than white clover. Fancy grades of white comb bring 12½@13c; No. 1, 12c, with some off in color at 11@11½ cents; amber grades slow at 8@10c. Extracted, white, 6@7c; amber, 5½@6½c; the price being governed by quality, flavor and package. Beeswax, if clean and good color, 30c per pound.

R. A. Burnett & Co.

New York, March 11.—There is no improvement in the comb honey situation. The demand is next to nothing; quotations nominal and no doubt some of the stock will have to be carried over. We quote fancy at 13c; No. 1 at from 11@12c, and dark at from 9@10c. Extracted is in fair demand: White at from 6@6½c; light amber at 5½c; Southern in barrels from 50@57c per gallon, according to quality. Beeswax firm at 29c.

Hildreth & Segelken.

Boston, March 9.—The demand for comb honey still continues light with heavy stocks on hand. Fancy white, 15@16c; No. 1, 14c. Extracted, 6@8c, according to quality.

Blake, Scott & Lee.

Kansas City, March 17.—The honey market still shows very little life and prices are down and very weak, the best white honey selling at $2 a case and down as low as $1.25. Extracted from 4½@6½c. Beeswax, 28c. We have been expecting the market to do better, but so far have been disappointed.

C. C. Clemons & Co.

Cincinnati, O., March 20.—The comb honey market has been a drag the last month; this caused the holders to offer extra inducements in prices. Quotations obtained are as follows: No. 1 fancy water-white comb, 12@13c; No. 2, 10½@11½c. Extracted: white clover in barrels, 6½c; in cans, 7½@8 cents; amber, in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c.

C. H. W. Weber

Philadelphia, March 22.—As the season advances, the call for honey is decreasing, and the market at the present time is dull. Some few sales. We quote: Fancy white, 13@14c; No. 1, 11@12c; amber, 11c. Extracted, white, 6½@7c; amber, 5½@6c. Beeswax, 28c.

We are producers of honey and do not handle on commission.

Wm. A. Selser.

Albany, N.Y., Feb. 8.—Honey market dull this extreme cold weather, especially comb, which candies or granulates and cracks easily. We quote: Fancy white, 13@14c; No. 1, 12@13c; mixed, 10@11c; buckwheat, 10@11c. Extracted, better demand: Buckwheat, 6@6½c; white, 6@6½c. Buckwheat most in demand, as the Jewish people will have no other. Beeswax, 30@32c.

H. R. Wright.

Cincinnati, March 10—There is little, if any, improvement in the honey market here, since our last quotation. We hope to render a more encouraging report soon. We quote amber extracted honey in barrels and cans at 5½@6½c. White clover at 7@8c. Fancy white comb at 12@13c. Beeswax, 28c.

The Fred W. Muth Co.

San Francisco, March 15.—White comb, 1-lb. sections, 11@12 cents; amber, 8@10c. Extracted, white, 6@6½ cents; light amber, 4½@5½c; amber, 3¾@4¼c; dark amber, 3@3½c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

Local demand is light, but there is considerable going outward, another shipment of 200 cases being made this week to Germany. Stocks are largely of amber grades and are not of very heavy volume, but are ahead of immediate local requirements, there being no disposition on the part of jobbers and retailers here to carry much honey at this advanced date in the season.

Never Go Out
And last from 5 to 21 years

BINGHAM Original Direct Draft CLEAN Bee Smokers

4 Largest Sizes Soot Burning

Pat'd 1878, '82, '92 & 1903

Tin 4-in. Smoke Engine	3½-inch	3-inch	2½-inch	2-inch Wonder
$1.50.	$1.10.	$1.00.	90c.	65.—per mail.

Sent on receipt of price per mail.

T. F. BINGHAM, Farwell, Mich.

Otisville, Pa., Jan. 13, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine.

Fred Fodner.

LEWIS' GOODS IN THE EAST.

NOTICE.

We have just arranged with the following well-known firm for the sale of our goods in Pennsylvania and vicinity. They will handle our Bee-Supplies in **Large Quantities** at **Factory Prices**, and can furnish you anything in our Catalog promptly.

Cleaver & Greene ✕ ✕ ✕ **Troy, Pa.**

Following is a complete list of distributing points for Lewis' Goods :

Where Are You?

Cleaver & Greene, Troy, Pa.
E. T. Abbott, St. Joseph, Mo.
Wis. Lumber Co., Faribault, Minn.
Dadant & Sons, Hamilton, Ill.
C. M. Scott & Co., Indianapolis, Ind.
Fred W. Muth Co., Cincinnati, O.
Norris & Anspach, Kenton, O.
A. G. Woodman, Grand Rapids, Mich.
York Honey & Bee Supply Co., Chicago, Ill., 141 & 143 Ontario St.
Louis Hanssen's Sons, Davenport, Iowa.
Adam A. Clarke, Le Mars, Iowa.
Southwestern Bee Co., San Antonio, Tex., 438 W. Houston St.
Robert Halley, Montrose, Colo.

PORTION OF ONE LUMBERYARD.

Where Are You?

Colorado Honey Producers' Ass'n, Denver, Colo.
Fruit Growers' Assn., Grand Junction, Colo.
Arkansas Valley Honey-Producers' Association, Rocky Ford, Colo.
R. C. Aikin, Loveland, Colo.
Paul Bachert, Acton, Calif.
Chas. H. Lilly & Co., Seattle, Wash.
Fred Foulger & Sons, Ogden, Utah.
A. Coppin, Wenona, Ill.
California Lumber & Milling Co., San Francisco, Calif.
C. B. Stevens & Co., Havana, Cuba.
E. H. Taylor, Welwyn Herts, Eng.

"This is the lumber that makes the hives that Lewis makes."

LEWIS WATERTOWN, U.S.A.

Send for free Catalog of 88 pages.

G. B. LEWIS CO. Manufacturers of Bee-Supplies **Watertown, Wis.**

American Bee Journal

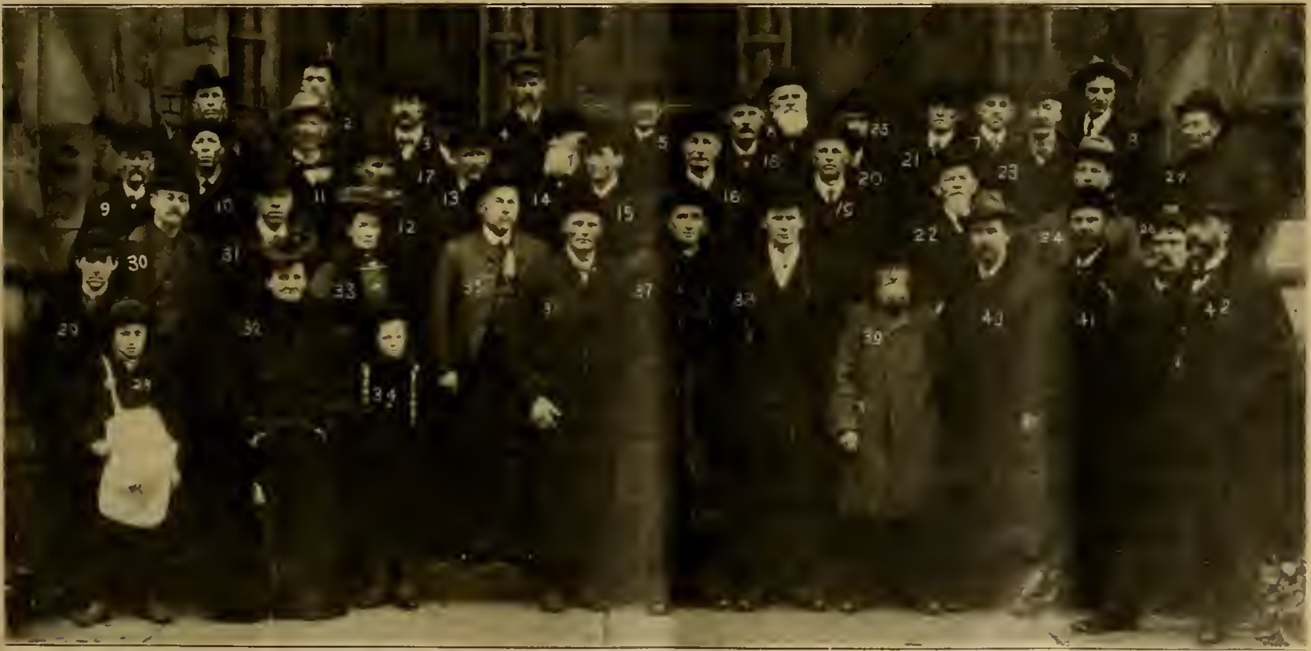
WEEKLY—$1.00 A YEAR.
Published by GEORGE W. YORK & CO., 334 Dearborn Street.

45th Year. CHICAGO, ILL., APRIL 6, 1905. No. 14.

MASSACHUSETTS AGRICULTURAL C

A Group of Members of the Michigan State Bee-Keepers' Convention.

(See page 262.)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1. W. J. Manley
4. John Short
7. Huber H. Root
8. A. G. Woodman
9. Geo. H. Kirkpatrick
10. Oscar Smith
11. G. A. Bleech
12. C. L. Brigham
13. E. S. Hall
14. T. F. Bingham
15. L. S. Griggs
16. W. E. Forbes
18. W. D. Soper
19. Clyde Cady
26. R. L. Catlin
27. Geo. E. Hilton
32. Mrs. Geo. Jackson
33. Mrs. E. S. Hall
35. E. D. Townsend
36. C. A. Huff
37. E. B. Tyrrell
38. Frank Rasmussen
39. O. H. Townsend
41. L. C. Woodman
42. W. Z. Hutchinson

Every Bee-Keeper

Or Prospective Bee-Keeper

should read GLEANINGS IN BEE CULTURE. It gives you the latest in the apicultural world. If you have honey and wax for sale it tells you the market prices. If you have troublesome questions to solve, it helps you. The very best bee-keepers write for it. The following noted writers contribute regularly:

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* * *

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Gleanings in Bee Culture, 6 months, 25c.

We are certain that any one interested in bees would be greatly benefited by becoming a subscriber to GLEANINGS IN BEE CULTURE. We want you to give it a trial. After you have received a few numbers we are sure you will become a permanent subscriber. We therefore make a special trial offer of 6 months for 25c. Fill in your name in space below, remit 25 cents, and the paper will begin at once.

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COUNTY ....

STATE ....

Root's Goods in Chicago.

For the saving of freight for our western trade, as well as to give much quicker delivery, we opened a branch office in Chicago, Oct. 1, 1903. The following taken from our catalog of last year, explains the transfer then made:

> The business for many years conducted by George W. York & Co., at 144 E. Erie Street, as agent for The A. I. Root Company's supplies, is this day transferred to The A. I. Root Company, to be conducted as a branch office. Please note change of name to avoid confusion in our work. THE A. I. ROOT CO.
> October 1, 1903.
>
> *To Our Customers and Friends:*
>
> In transferring back to The A. I. Root Company the bee-supply business, which we took over from them some years ago, we do so with regret, as we have labored hard to build up a large and honorable trade in bee-appliances, and value beyond expression the valuable patronage accorded us during the years. We trust the same will be continued to our successors in the business.
> GEORGE W. YORK & Co.
> Chicago, Ill., Oct. 1, 1903.

The conveniences offered by the branch office were evidently appreciated by the bee-keepers of Illinois, Wisconsin, and other States beyond, for the business done by the branch was much beyond our expectations. During the rush season—April, May and June—orders came in so fast that, in spite of frequent orders to the factory for another car of goods, the stock ran low, and some delays and annoyances thereby were caused. Some little confusion because of change of name and manner of conducting the business (from agency to branch office), but these have all been overcome. We are better than ever prepared to handle your business carefully and promptly, and solicit your patronage.

Low Freight and Quick Delivery.

A glance at any railroad map will show the superiority of Chicago as a shipping-point. Because of the great number of railroad and steamboat lines centering in Chicago, and the large stock of goods we carry, we can give you the best of service. This office is in constant touch with the factory and home office, and in many cases can give your order quicker attention and earlier shipment than the factory, to say nothing about the saving in time and transit and lower transportation charges.

Wholesale and Retail.

We are prepared to furnish goods at wholesale and retail, the same as the home office.

Terms.

Our terms are cash with the order. We pay cash for material, and pay our helpers cash every week for their work; therefore we must have cash in advance for the goods furnished. Do not ask for credit.

Beeswax Wanted.

We are in the market for good beeswax the entire year, and pay the same prices as quoted by our home office in each issue of GLEANINGS IN BEE CULTURE. Send your wax direct to us for cash or in exchange for supplies.

Extracted Honey.

In the course of a year we use large quantities of extracted honey, and are pleased to get sample and prices from parties who have honey to exchange for supplies. We are also prepared at all times to furnish first-class honey to any one who is in need of same, either bee-keepers who have a demand for more than they can furnish, or from dealers. Get our prices before you place your orders elsewhere.

DANZENBAKER HIVE.

"Facts About Bees", a 64-page book written by Mr. F. Danzenbaker, giving a complete description of his famous hive and directions for using. Full of valuable information. Sent on receipt of a 2-cent stamp to pay the postage. **Send for it.**

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QUALITY
You can produce better-looking honey.

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You can produce more of it.

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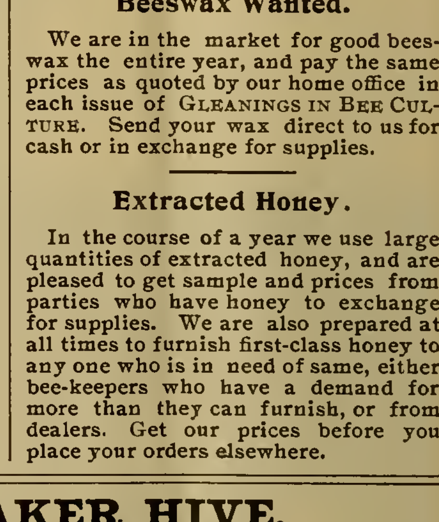

SPECIAL NOTICE.

The great popularity of the Danzenbaker hive has brought the shallow brood-frame and the tall plain sections into prominence. It must be remembered that no other hive contains the essential features of the Danzenbaker. The success of this system depends on having everything JUST RIGHT, so you should place your order for the Danzenbaker hive with our office, or any of our branches or regular agents.

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THE A. I. ROOT CO., 144 East Erie Street, Chicago, Ill.

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BEE JOURNAL
The Oldest Bee-Paper in America
• Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor. CHICAGO, ILL., APRIL 6, 1905. Vol. XLV.—No. 14.

Editorial Notes and Comments

The Honey-Producers' League

This is the name of a new organization which is described in detail by its Secretary, in the following:

THE HONEY-PRODUCERS' LEAGUE

PROSPECTUS AND CONSTITUTION.

A crisis has been reached in bee-keeping. The time is now here when bee-keepers must band together, as never before, fight an insidious foe, and cope with the conditions of modern times. In short, the wide-spread ignorance regarding the value of honey as a food (its deliciousness, cheapness and digestibility), coupled with an almost universal belief in its adulteration, which belief is fostered by the continued publication of untruthful stories concerning manufactured comb honey, to which may be added the fact that cheap syrups are being pushed upon the market with great vigor—all these combined are depressing the honey market beyond all precedent; and, unless something is done to counteract these influences, our occupation, or at least a good share of its profitableness, will soon be gone.

A large share of last year's honey crop is still unsold, while the market is practically *dead*, as is easily shown by reference to the market reports. The crop of the coming season will soon be here, and should it prove a bountiful one, with last year's crop still unsold, where will prices go then? We may as well face the situation squarely. Then comes the all-important question: What shall we do about it?

Three or four of us began recently to discuss this question privately by mail, and we decided to act *promptly* to the extent of summoning (some by telephone and telegraph) to a conference in Chicago some eight or ten representative manufacturers, dealers, publishers and honey-producers. As a result, such a meeting was held March 14 and 15, the whole two days being occupied in forming an organization, and in discussing ways and means whereby said organization can increase the demand for honey.

The first step was the drafting of a Constitution, which reads as follows:

Constitution

ARTICLE I—Name and Headquarters.

Sec. 1.—The name of this organization shall be "The Honey-Producers' League."

Sec. 2.—Its headquarters shall be Chicago, Ill.

ARTICLE II—Objects.

Its objects shall be to create a larger demand for honey by popularizing its use among the consuming public through advertising in newspapers and magazines its great value as a food, and by such other methods as may be considered advisable by the Executive Board. Also by publication of facts concerning the production of honey to counteract any misrepresentation of the same.

ARTICLE III—Membership and Dues.

Sec. 1.—Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.

Sec. 2.—Any honey-dealer, bee-supply dealer, bee-supply manufacturer, bee-paper publisher, or any other firm or individual, may become a member on the annual payment of a fee of $10, increased by one-fifth of one (1) percent of his or its capital used in the allied interests of bee-keeping.

Sec. 3.—The annual dues shall be payable in advance, on or before May 1 of each year.

Sec. 4.—Membership shall cease when dues are in arrears three months.

ARTICLE IV—Executive Board.

Sec. 1.—An Executive Board, consisting of seven members, shall be elected by mail ballot annually in the month of March (after the first election), the ballots to be sent to the membership between March 1 and 5, the polls to be closed at noon April 1. They shall be the seven members receiving the highest number of votes cast. In case of a tie-vote, the other members of the Board shall decide it.

Sec. 2.—The votes shall be mailed to the Secretary, who, with another member to be selected by the balance of the Executive Board, shall together count the votes and certify the result to the Manager, who shall then forward copies of the same to the United States bee-papers for publication, and also give same in his annual report.

Sec. 3.—The Executive Board shall have the general management of the League, and shall elect from their number the officers named in Article V, Sec. 1, who shall execute the orders of the Board, and hold their several offices until their successors are elected and qualified.

Sec. 4.—The Executive Board shall meet annually on the third Wednesday in April, in Chicago, for the election of officers, and for the transaction of such other business as may regularly come before it.

Sec. 5.—Special meetings of the Executive Board shall be held when called by the President, upon request of three or more members of the Board.

ARTICLE V—Officers.

Sec. 1.—The officers shall be a President, Vice-President, Secretary, Treasurer and Manager.

Sec. 2.—The duties of the President and Vice-President shall be such as usually devolve upon these officers.

Sec. 3.—The duties of the Secretary shall be to keep a record of the meetings of the Executive Board, and to count the ballots of all the membership, as provided by Article IV, Sec. 2, the result of which he is to forward at once to the Manager.

Sec. 4.—The Treasurer shall keep a record of all moneys received from the Manager, giving his receipt therefor; and he shall pay out funds only on bills approved as per Sec. 5 of this Article.

Sec. 5.—The duties of the Manager shall be to conduct the actual business of the League as directed by the Executive Board; to keep a list of the membership; to account for all moneys received, and turn same over to the Treasurer, taking his receipt therefor; to prepare and mail in March of each year, to the membership, an annual report containing a financial statement, and such other matters as would be of interest to all concerned, including all ballots and amendments; and to issue orders on the Treasurer for payment of all bills when countersigned by the President.

Sec. 6.—The Treasurer and Manager shall each furnish such bond as shall be satisfactory to the Executive Board.

ARTICLE VI—Salaries and Expenses.

Sec. 1.—No salary shall be paid any officer of this League, but the actual expense of holding meetings of the Executive Board (when they deem such necessary) shall be paid from the general expense fund.

Sec. 2.—There shall be an allowance of (5) percent of the cash receipts to cover all general expenses, such as printing, meetings of the Executive Board, etc., the remaining ninety-five (95) percent to be applied on the advertising proper.

ARTICLE VIII—Amendments.

This Constitution may be amended by a two-thirds vote of the membership at any regular election, provided such proposed amendment be first submitted to the Executive Board and approved by it.

Minutes of First Meeting

A temporary organization was effected and the foregoing Constitution adopted, when, upon motion of Ralph W. Boyden, the following members were elected as an Executive Board: Dr. C. C. Miller, W. Z. Hutchinson, Arthur L. Boyden, George W. York, C. P. Dadant, N. E. France and George C. Lewis.

A permanent organization was then formed, and the following officers elected: President, Dr. C. C. Miller; Vice-President, George C. Lewis; Secretary, W. Z. Hutchinson; Treasurer, Arthur L. Boyden; Manager, George W. York.

Before adjourning it was resolved to do no general advertising until there is at least $5000 in the hands of the Treasurer; the Manager was instructed to take the necessary steps for securing the incorporation of the League; and the Secretary and Manager were appointed a committee to prepare the necessary literature for use in soliciting membership.

Some Questions Answered

While the Constitution quite clearly outlines the aims and objects of the League, a few questions will naturally spring to the lips of one who contemplates joining its ranks, hence it may be well to answer in advance as many as possible of them.

Naturally, the first question asked will be: "Why form a new organization when the Constitution of the National allows the use of its funds for such work?" Principally because the National has not enough money at its command to do the work effectively, and it could not raise enough without a change in its Constitution, as, at present, only one extra assessment of $1.00 per member can be made each year, while the work of advertising, to be effective, requires *thousands of dollars* AT ONCE.

Perhaps some will ask why the matter was not discussed in advance in the bee-papers, and a public meeting called? Why was the mattter kept quiet, and the work done with apparent secrecy? It was done so quickly simply to save time. When the true situation had fairly dawned upon the three or four who were first discussing the matter, it became equally apparent that only by the most prompt and active work could anything be done that would help the sale of the last year's honey crop before the coming of this year's crop.

Some may wonder why the members of the Executive Board were all chosen so near Chicago. They were thus chosen that they might quickly and cheaply attend Board meetings. Should an important question requiring immediate action come up, telegrams sent every member in the afternoon would enable them to be in Chicago the next morning. If any mistake has been made in the choice of officers, it can be corrected at the next election. As it is, however, it is doubtful if a set of officers can be chosen who would have more completely at heart the success of the undertaking. Besides this, they are all friendly to one another, and will work harmoniously as a unit.

It may be asked why no salaries are paid the officers. If these men are willing to give so freely of their money, they should be equally willing to give their time; besides, if they were paid salaries, many might be inclined to look upon the whole thing as a scheme on the part of the officers to put money into their own pockets. As it is, these men are really putting in their time, money, and energies, expecting no reward except such as will come to them from the improved conditions of bee-culture. Only as honey-producers are benefited will any benefit come to manufacturers, dealers and publishers, yet a heavier burden is placed upon them than upon the actual honey-producer. The contributions of the Board members alone will reach nearly $1000.

Every one will, of course, be interested in knowing what forms of advertising will be adopted. Mainly that of advertising in the daily papers and magazines. (No advertising will be done in the bee-journals, as that would be simply a waste of money.) Probably the first feature will be that of killing, or removing, the false beliefs regarding the manufacture of artificial comb honey. Large space, perhaps one-fourth or one-eighth page, will be used in leading dailies, a large heading reading something as follows:

$10,000 FORFEITED!

Then will follow an explanation and refutation of the matter, and the offer of $10,000 as a forfeit to any one who can show a sample of comb honey that has been produced artificially. Of course, care will be taken to word the offer properly, so that no technical advantage may be taken. The best talent of the country will be employed in preparing and placing the advertising. Many papers that publish these advertisements will probably be willing also to publish articles on bee-keeping written with a view to increasing the demand for honey. Possibly firms that print "patent insides" for other newspapers may be induced to use such articles.

At fairs and exhibitions it may be advisable to have educational honey exhibits, together with the distribution of suitable literature. Possibly it may be well to put stereopticon lectures in the field; but, as has already been stated, newspaper advertising will be the main feature.

AN ENCOURAGING INCIDENT.

Let me tell just one little incident: On the train, while going home from the meeting, I fell to talking with a young man who occupied the seat with me. As we became somewhat acquainted I told him of the object of my trip to Chicago, going somewhat into detail. In reply, he said in substance:

"At our home we are fond of biscuit and pancakes, with honey or maple syrup. We send down to Vermont, to an acquaintance, to get the maple syrup, as that is the only way that we can feel certain we are getting the pure article. We don't buy honey very often because, while I had never heard how the story started as you explain it, I had been led to believe that a good share, even of comb honey, was manufactured stuff (mostly paraffin and glucose), and I didn't care to eat it. I am very glad to have met you, and to have it proved to me so conclusively that I can eat comb honey, and feel that it is the genuine article."

Friends, there are millions of men and women just exactly like my chance acquaintance, and, in the language of the street, it is "up to us" to convince them of the error of their belief. If we could induce one million of them to step into the groceries to-morrow and each buy a pound of honey, what do you suppose would happen?

This is the work for us to do, and it is the most important work that has been taken up in our line in many a long year. Every other industry is *pushing* its products upon the markets by every means imaginable; are we to sit supinely down and let ignorance, misrepresentation, and business enterprise push our product off the earth? See how new and unknown things are pushed to the front by the force of advertising; let us not lag behind, but use this new force in modern business—*advertising*—to push our delicious product into the position it so richly deserves.

Just a parting word: Don't wait to "see how it is going to turn out." If others are putting in their time and money for the good of the cause—to accomplish something that will help you—meet them half way, join hands with them, do it promptly, and success is assured.

Flint, Mich. W. Z. HUTCHINSON, *Secretary.*

☞ Address all business correspondence, membership dues, etc., to the Manager, George W. York, 334 Dearborn St., Chicago, Ill.

If you have read all the foregoing carefully we believe you will agree that it is the right kind of a move to make on the part of bee-keepers. Surely, something ought to be done to place honey on a more-certain-demand basis. And we don't know of anything else that should be as effective as the kind of work that is proposed to be done by The Honey-Producers' League.

But it will require money to do the work. And yet, in the manner proposed, it will not be heavy on any one person. The plan is to divide it around among the thousands of those interested in bee-keeping or honey-production so that it shall be no burden on any one.

Already the following are entered on the Manager's Membership Book as having paid their first year's dues:

Dr. C. C. Miller	$ 10
George W. York	25
Geo. C. Lewis (for G. B. Lewis Co.)	210
H. M. Arnd (for York Honey and Bee-Supply Co.)	15
E. Whitcomb	1
Arthur L. Boyden (for A. I. Root Co)	610
E. Kretchmer (for Kretchmer Mfg. Co.)	50
W. Z. Hutchinson	13
C. P. Dadant (for Dadant & Sons	70
Griggs Bros	11
F. A. Salisbury	30
Total	$1045

We trust that as rapidly as possible our readers will become members of The Honey-Producers' League, and thus aid in furthering their own interests as well as the interests of all who are connected in any way with honey or its production.

Miscellaneous News ✣ Items

Honey Ointment for Sores.—Honey and flour mixed to the extent of half the quantity of honey with water is stirred into a stiff mass. Linseed oil and the yolk of an egg to be added in order to give the same a tenacious tendency. Quite simple; try it.—Rural Californian.

* * *

Truly Wonderful.—The following interview was recently sent us by C. G. Schevalier, of Maryland, having been clipped from the funny column of the Philadelphia Press:

WONDERFUL.

Mr. Kidder—Yes, this is artificial honey.
Mrs. Kidder—You don't say?
Mr. Kidder—Yes; gathered from artificial flowers by artificial bees.
Mrs. Kidder—The idea!

* * *

Country Life in America is perhaps the most beautifully illustrated monthly publication in the United States. The April issue contains an article on bee-culture by Anna B. Comstock, of New York State. The price of "Country Life in America" is $3.00 per year, or 25 cents per issue, postpaid. On receipt of this latter amount its publishers, Doubleday, Page & Co., either at their New York City or Chicago address, will mail a copy of the April issue. The Chicago office is Room 345 Marquette Building.

* * *

Bee-Keeping in Wisconsin.—Pres. N. E. France, of the Wisconsin Bee-Keepers' Association, wrote us as follows March 11:

Yesterday I got the Wisconsin State Fair premium list changed, adding $100. It is now as follows:

	1st.	2d.	3d.
Italian bees, single-comb nucleus	$ 8	$ 5	$3
Carniolan bees, single-comb nucleus	8	5	3
White comb honey, 10 pounds	10	6	4
White extracted honey, 10 pounds	10	6	4
Amber comb honey, 10 pounds	8	5	3
Amber extracted honey, 10 pounds	8	5	3
Dark comb honey, 10 pounds	7	3	2
Dark extracted honey, 10 pounds	7	3	2
Most attractive comb honey exhibit	15	12	8
Most attractive extracted honey exhibit	15	12	8
Yellow beeswax, 10 pounds	3	2	1

Premiums are offered for Wisconsin products only. Now is the time for Wisconsin bee-keepers to begin to get ready for the State Fair. I am to be an exhibitor, but not for any premiums.

Also, yesterday, I got the new Wisconsin Food Law on honey so changed as to protect the bee-keeper better against adulterated honey. Bees in Wisconsin are reported as wintering well, and clover looking good.
N. E. FRANCE.

* * *

Missouri's Apiary Bill Vetoed by Gov. Folk.—As announced last week, Gov. Folk vetoed the Apiary Bill passed by both branches of the Missouri Legislature. In doing so, Mr. Folk "got off" the following:

To the Secretary of State—

Sir:—I have the honor herewith to transmit to you, without my approval, Senate Bill No. 268, entitled, "An Act to provide for the appointment of a State Inspector of Apiaries, and to regulate the duties thereof, providing a penalty for disposing of diseased honey or bees," which reached me within the ten days next before the adjournment of the General Assembly.

This Act provides for the appointment of a Bee-Inspector to look after the apiaries of the State. On the first examination, if he thinks the bees are diseased, he is to give the person in charge instructions as to the manner of treating them. Provision is also made for a second examination, and the Inspector may then, if he sees fit, physic the bees himself, or if he thinks best he may destroy them.

This measure illustrates the fallacious idea that the Government can do more for the individual than the individual can do for himself. Any one intelligent enough to conduct a bee-industry is certainly better qualified to attend to them and manage his own business than any State Inspector could possibly be.

There is no magic in a State inspectorship of bees, or anything else to cure the ills that may exist. It is said this measure is asked for by the honey-raisers to suppress contagious diseases among bees. But they can, by meeting together and exchanging ideas, do for themselves what the State can not do through this Bill. If all together they are unable to cope with the situation, how can one of them, named as Inspector, do better?

The principle of the measure is paternalistic, and not in accord with the democratic theory of government. The Inspector is authorized to go to any one's home, and if he should not like the way the bee-hives are conducted, he could for some real or imaginary disease annihilate the whole brood, leaving the owner without remedy, but for all of which the Inspector would receive $4 a day.

Any Inspector appointed would be only a man, with defects just like other men. He could not have superhuman knowledge of bees or of the bee-business, and could not be expected to accomplish more than the individual bee-keeper could for himself.

My opinion is, this question would best be left to the owners of bees, and to the bees themselves, who have repeatedly demonstrated their qualities of self-reliance.
Respectfully,
JOSEPH W. FOLK, *Governor.*

By the same lines of argument Mr. Folk would veto a Bill providing for health officers in cities, for if people generally were not "intelligent enough" to keep themselves and their children well, and free from contagious diseases, why, it would be ridiculous to call in a health officer!

Besides, other States having equally intelligent and sane men as governors are approving such wholesome and just legislation. Surely, Mr. Folk, did he rightly understand the Missouri Apiary Bill, would not have vetoed it. It was a needed and just measure, and should have been approved by Gov. Folk.

But Messrs. Abbott, Holekamp, Stewart, and others of the hustling Missouri bee-keepers will now have a chance both to enlighten and sweeten their mistaken Governor.

✣ Contributed ✣ Special Articles

Wintering Nuclei in Observatory Hives

BY DR. C. C. MILLER.

JUST when I begin to think complacently that there's some one thing about which I know pretty nearly for certain, along comes some one to give me a rude jolt by showing that I don't know, after all. This time it's a Connecticut Yankee, although there's nothing rude in his manner of giving the jolt. I supposed it was hardly a practicable thing to winter successfully a one-frame nucleus in an observatory hive, although a good many have tried it. Well, Allen Latham feels pretty sure it can be done, and for the very good reason that *he has done it.*

After reading what I said on page 183, he wrote me a letter which, although not intended for publication, contains so much information that I must ask his pardon for giving others the benefit of at least a part of it. That part follows:

MY DEAR DR. MILLER:—I still think that you misunderstand the intention of "New Jersey," and though I would not make any rejoinder through the columns of the American Bee Journal, I think that I will write to you that I may make my own position plainer.

I surely think that the questioner wished to find out a good way to feed an observatory-hive colony during the active months, and I surely thought, when I first read the question, that "late summer" meant the last of August or early in September.

It would be no idle boast for me to lay claim to knowing someing about the care of an observatory hive, for I have kept bees in one continuously since May, 1902, and now have 5 full colonies which are direct descendants from that colony. Of its own swarms one came out May 11 and the other May 21, the following year.

I had studied bees many years, and tried without success to winter them in single-comb glass-hives till the winter of 1902-3, when I partially solved the problem. My two observatory hives this winter attest that I have completely solved the problem.

One of the secrets of success in this venture is in causing the little colony to breed late in the fall—till Oct. 20, if possible. This is done by feeding and nursing till the weather makes it unwise to go farther. In this way the colony is composed of young bees which will stand the unusual test to which these bees are to be subjected. If this is not done, and only old bees, bees hatched, that is, emerged, in August and early September, make up the colony, the colony will suffer unless the spring is early and abounding in days when bees can gather pollen.

The limited comb-space prevents the storing of much pollen in the fall, and the small colony must depend in spring upon new pollen for its first young bees. If deprived of this the old bees, rapidly dying off, leave the hive almost deserted.

If the winter is severe only the strong bees will survive even into March.

Knowing these facts concerning the observatory hive, I realized that "New Jersey," and others who might supply a hive with a comb of honey earlier than late in September or early October, would probably commit a fatal error. If this comb of honey has a patch of sealed brood in the middle of it as large as my hand, or say about 25 square inches, then all is well.

So you see, Dr. Miller, that even though brood-rearing may have ceased in the yard in the reguar colonies, that it must not have ceased in the little hive in the window, and it was this fact that led me to write what I did on page 126. I naturally did not stop to think that the "late summer" carried a different meaning to others than it did to myself.

Bees here have wintered excellently, and the spring seems to be opening up earlier than it did last year. Almost every day I see bees out after water. ALLEN LATHAM.

New London Co., Conn., March 12.

⁂

Some Notes and Comments—Bee-Hives

BY F. GREINER.

SOME bee-hives are so constructed that it seems necessary to give them frequent "goings-over"—removing propolis, burr-combs, and the like, in order that the combs may be handled easily. I have kept bees in frame hives for 30 years, and have not found it necessary to clean any of the frames or hives when there were bees in them. I use hives with wood rabbet and frames made of one-inch-wide material. There is not a frame in my 200 occupied hives but can be taken out with comparative ease, and nearly all my frames are of the loose-hanging kind. When for some reason a hive-body is empty—as it often happens when we "shake" bees—why, then, if it seems necessary, we scrape the inside and the rabbets, but it is not generally necessary.

On the tops of my frames some burr-combs accumulate; these are sometimes removed with a simple little tool which answers nicely as a hive-opener. It is made on the putty-knife order, only much stouter. I made it from a piece of a broken spring. One end is drawn out to not quite knife-edge and is about 1¾ inches wide; the other is left the size of the steel, about 1⅜ inches wide, and has the corners nicely rounded. It suits me very much better than the screw-driver I have been using for many years. I made me a number of these tools and keep one in each yard. They are very handy.

SECTION-PRESS FOR FOLDING SECTIONS.

When it is proposed to employ a machine to do certain work the questions come up: Is the work done more effectively, better, quicker, with less expense? What does the machine cost? These questions came to me when I was reading Mr. A. F. Foote's illustrated article on a section-press. I don't see that this press facilitates the work. I am able to fold as many sections without it, simply using my fingers to do the work. I fold the sections into a square corner improvised by a piece of scantling securely fastened to the work-bench. The thumbs do the pressing. The tap of a light hammer is very seldom required, and only when a section for some reason fails to go together as it should. Before I invest in a machine I must be satisfied that I can save something by using it.

Mr. Editor, you said before the bee-keepers in St. Louis that honey ought to bring 50 percent more than it does now. I want to ask what sympathies you have for the consuming public? If you were a day laborer, do you think you could afford to eat honey at an advance of 50 percent over the present prices? Don't you think we would sell a great deal more honey if it could be sold lower by 20 percent? My clover honey brought me, f. o. b. my station, 14 cents. I judge that the consumer had to pay not less than 20 cents per pound. What working man can afford to pay 50 per cent more, or 30 cents per pound? No, no, the price of honey at 20 cents is high enough compared with 6-cent sugar.—[We meant to say that in a wholesale way prices should be higher.—EDITOR.]

RENTING LAND FOR AN APIARY.

How much should be paid for the privilege of keeping an apiary on some one else's land depends largely upon circumstances. The bee-keeper can afford to pay generously for such a privilege. While the occupancy by bees of a farm costs the owner of same nothing, and is many a time a direct benefit to him, yet we must not lose sight of the fact that the people living on the farm may be, and often are, inconvenienced by the bees. I find but very few people who are willing to consent to my locating bees on their premises. I could not hire them for a $5 bill to accept one little bee-sting free.

There is nothing to hinder every farmer keeping bees and producing honey enough for his own family. There is nothing to hinder his knowing how to manage bees successfully; but when he does not know enough to do so, and has no inclination to learn it, he would better keep his hands off.

ADVANTAGES OF NO-BEE-WAY SECTIONS.

The only advantage I realize from the use of no-bee-way sections is that I save in shipping-cases and timber to make the sections from. Six shipping-cases take the same amount of honey in no-bee-way sections as seven cases in bee-way sections. The no-bee-way sections cost 25 cents less per 1000.

DRIP-STICKS FOR NO-DRIP CASES.

Drip-sticks for shipping-cases should be made thicker than they are. It does not happen often, but sometimes honey leaks badly on account of a crack across the flakes. A good amount of room under the sections would prevent the sections from becoming daubed. I have received empty cases back from the grocery which were perfectly dry and clean, and could be used again without replacing the paper trays. Then, again, I have seen honey very badly daubed because the drip-sticks were too thin.

To help out Dr. Miller, on page 39—What would bees do on only drone-comb—I would say that if a new swarm is hived on drone-comb foundation only, they (the bees) will make bad work with it. There will be all sorts of cell-shapes. The aim of the bees seems to be to build worker-comb. But when finished drone-combs are given, the bees will occupy them as other combs, and make the best of it, rearing worker-brood in the drone-comb. The reared workers will be no larger than those reared in worker-cells.

Ontario Co., N. Y.

Convention Proceedings

Report of the Michigan State Convention

BY E. B. TYRRELL, SEC.

The 40th annual meeting of the Michigan State Bee-Keepers' Association was held at Grand Rapids Feb. 23 and 24, 1905. It was called to order at 2 p.m. by Pres. W. Z. Hutchinson. The minutes of the previous convention were read and approved.

Pres. Hutchinson asked how many believed the booklets issued last year helped them to dispose of their honey. Several reported sales made by the pamphlet, one member saying it sold all of his honey for him. It was thought beneficial in giving consumers confidence in the honey.

The Secretary then gave a financial report for the year, showing total receipts of $43.21, and a total expenditure of $39.80, leaving a balance on hand of $3.41. The report was approved by the convention. A vote of thanks was then tendered the Secretary for his reports.

It was decided that last year's motion in regard to issuing the honey pamphlets be continued.

On motion, George W. York was requested to act as judge on the honey exhibited at this convention.

UNITING WEAK COLONIES IN THE SPRING.

"Has any one tried putting weak colonies above strong ones in the spring, putting a queen-excluder between the hives?"

J. A. Pearce tried putting 16 weak colonies above 16 strong ones in the manner stated, leaving them about three weeks, with good results. He is well pleased with the plan. They were separated at the beginning of the honey harvest. He did not lose any queens by this method.

H. F. Strang tried this plan by putting 18 weak ones over 18 strong ones, with good results. The lower colonies were very strong when put together, and the upper ones very weak. He left them together about 22 days. They should not be left over 25 days. He looked at them every 5 or 6 days, and found them acting as 2 colonies all the time. He raised the front end of the hive and poured in ½ pint of feed (half honey and half water) each day. Each colony was put back on its own stand, and seemed to stay all right. He would unite them the last of April or first of May. No entrance was given to the upper story, so all used the same entrance. One advantage in this plan was that it did away with robbing.

T. F. Bingham thought the only advantage of the plan was that it saved the extra queen. Believes the upper colony is benefited at expense of lower one.

Pres. Hutchinson thinks there is no question but that the upper colony is benefited, but there is a question as to whether the lower one is not hurt some.

Mr. Pearce said the strong colony is not hurt by the weak one being above. He believes the sooner they are put together in the spring the better.

H. K. Beecham believes that colonies too weak in the spring to protect themselves should not be bothered with.

SNOW AROUND HIVE-ENTRANCES.

"To what extent would you remove the snow from around the hives in the winter?"

Huber H. Root believes it beneficial to leave the snow around the hives, but ice should not be allowed to form in the entrance. He reports bees wintering finely for him this year, banked up all around with snow.

G. A. Bleach reports good success from bees covered with snow. He had 20 to 25 colonies entirely covered by snow, and found the heat of the bees had thawed a large cavity at the entrance.

Geo. E. Hilton wouldn't remove the snow from around hives until he was sure the bees could fly. He says bees will winter if the entrance is covered by snow, and that 100 colonies need no more air than one man. He reported one hive being hermetically sealed with ice, and the bees came out all right. He claims bees never smother. Quite a little discussion was raised here on the point of the amount of air that bees need during winter.

Mr. Bingham advised a neighbor to put his bees down cellar, and because they came out of the hives this neighbor plugged the entrance with rags, with the result that the bees wintered all right.

REMOVING BEES FROM HIVE-ENTRANCES.

"Did any one ever get any pay for cleaning dead bees from hive-entrances during winter?"

No one seemed to think it paid, and the discussion went right back on the snow question.

C. A. Huff reported practicing piling snow around the hives with good results.

W. J. Manley believes in banking with snow, although two years ago he had bees covered with snow and all died.

Mr. Hilton thought the honey used for winter stores was to blame. He said if bees are left under snow too long they start brood-rearing; they will not leave the brood for honey, and thus starve.

Clyde Cady asked if there was not danger from too early breeding when covered with snow.

Mr. Hilton thinks there is.

Mr. Cady then asked to what extent they should be covered.

Mr. Hilton said it doesn't matter so much to what extent they are covered, but as to length of time covered.

WRAPPING HIVES WITH BUILDING PAPER.

"Will it be a benefit to wrap colonies with one or more thicknesses of building paper when putting them out in the spring?"

Mr. Kirkpatrick tried it on 20 colonies last spring with good results. He laid it on top of the hive, then folded it down around the hives, then put on the cover. He will use it again this spring.

Mr. Bingham said that Capt. Hetherington reported it beneficial.

TEMPERATURE FOR CELLAR-WINTERING.

"What degree of temperature gives best results in cellar-wintering?"

Mr. Bingham reported 30 to 35 degrees in his cellar.

Mr. Manley said 36 to 38 degrees in his cellar. A discussion then ensued on cellar-wintering, Mr. Bingham giving a clear description of his cistern cellar.

Mr. Hilton believes a cellar as described by Mr. Bingham would be no good in clay ground.

Mr. Bingham believes a cellar could be built above ground, in a clay country, of cement, then banked with gravel. Some advocated cellar-wintering, others outdoor wintering. L. A. Aspinwall and Mr. Hilton advocated outdoor wintering.

ACID FOR WAX-RENDERING.

"How much acid should be used in rendering old combs into wax?"

Mr. Root advised boiling the wax in water until all is melted, then put in one percent of acid and boil ¼ minute, then pour all into a barrel into which has been previously put 3 or 4 pailfuls of hot water, and let it stand 24 hours. During this time the dirt in the wax sinks. Vinegar can be used in the same manner, but is more expensive. He said acid does not injure the wax. Vinegar, to be successful, must be very strong. Salt has also been used.

E. D. Townsend thinks that wax should not be boiled after it is all melted.

Mr. Root would not boil it after it is melted in rendering old combs, but does not believe boiling wax will darken it unless it is burned.

Oscar Smith renders wax by steam from a steam engine.

Mr. Manley also favors steam for rendering wax. He can render 300 pounds in half a day. He renders it over the second time, using screw pressure.

Mr. Root advised melting the wax before putting it in the press, as it is faster than heating in the press.

A motion was then carried, that those who are already members of the National can become members of the Michigan Association by paying 50 cents for dues for the latter.

(Concluded next week.)

Our Sister Bee-Keepers

OUR TOIL DOTH SWEETEN OTHERS

Conducted by Emma M. Wilson, Marengo, Ill.

How a Bee-Keeping Sister Won—and Didn't Get It

An interesting bit of history connected with bees and women has just been closed. The city of New York has some 30 colonies of bees at Bronx Park, and a competent person was to be chosen to care for them. That statement is all that is needed to understand the following clipping from the New York World, sent by the courtesy of Mr. W. M. Scardefield:

A Woman Heads the List

When Park Commissioner Schrader, of the Bronx, comes to select the first of the three apiarists which he thinks necessary to the proper care and cultivation of the bee-colonies in the parks under his jurisdiction, he will find that the name of a woman heads the eligible list which was sent to him to-day by the Civil-Service Commission.

Emma V. Haggerty, of this city, was the only woman among the 30 odd citizens who took the examination, and she passed with 97 percent. Her nearest competitor got 93 percent, and Miss Haggerty demonstrated that she knew more about bees and bee-culture than any of the aspirants.

SHE LIKES BEES.

The position pays $1200 a year, and Miss Haggerty wants it because she likes bees and has devoted a good deal of her time to studying them. But the question is, Will she get it? There is no doubt that she has proven herself the fittest of all the aspirants for the place, but it is upsetting precedent a bit to appoint a woman to such a place in the Department of Parks. The chances are that Miss Haggerty will be passed over and a man appointed, but if she is it will not be without strong protest from her friends, who believe that she ought to get the place.

To pass the examination for this place required more than an ordinary amount of knowledge about bees. Nine questions were asked of the applicants, and they had to "know bees" to answer them. One was "How does the cell of the queen-bee differ from that of the other bees?"

Another was, "What happens when bees are left without a queen, and how is a new queen provided?" Miss Haggerty answered these questions like an expert; also all the questions about how to protect the public from being stung by the bees, how to save the bees from disease, etc.

MIGHT SOLVE A MYSTERY.

It has been suggested that the appointment of a woman bee-keeper might result in some information being discovered as to what becomes of all the honey which the park bees make. No one has ever been able to discover just where it goes, but Miss Haggerty might solve the mystery.

The answer to the question: "Will Woman Become City Bee-Keeper?" is contained in the following clipping, kindly furnished by Mr. A. D. Jacot:

Rejects Woman Bee-Keeper

John H. O'Mara, of this city, has been appointed apiarist in his Department by Park Commissioner Schrader, of the Bronx, at a salary of $100 per month. Miss Emma V. Haggerty, a school teacher, headed the eligible list with a percentage of 97. It is understood that O'Mara was fourth on the list.

The Commissioner threw out the name of Miss Haggerty on the ground that she was a woman, and the keeping of bees was not a woman's work.

We are indebted to Mr. James McNeill for sending the following witty comments on the transaction:

Bees

(Miss Emma V. Haggerty, permitted by the Civil-Service Board to take the examination for a $120 job as city apiarist, led a dozen men, got 97 percent, and is now to be denied the position because she is a woman.)

Say their judgment was B-lated,
  C. S. men have wisely done;
Though a woman's not B-rated
  Just B-cause she rates "A 1."

Board, B-hind it's rail B-leaguered
  By the beats of politics
May B-moan the way it figured
  When fair Emma took the tricks.

No B-sotted Bee the B-som
  Of B-nighted woman fears;
On her face he's sure to see some
  Female smile which honey smears.

"Oh, B-ware B-skirted woman"
  Is a B-atific plan,
Civil Service men are human,
  Job's B-stowed upon a man.

Let the fair girl stick to sonnets
  On the billows and the breeze,
Since the Bees buzz in the bonnets
  Of the men who'd boss the Bees! —J. A.

Some may think this an appropriate place to deliver a homily upon the down-trodden condition of the "sisters," and the wrong they are called upon to endure at the hands of the usurping "brothers," but all things do not point exactly in that direction.

The three clippings were sent in, not by any of the sisters, but by three different brothers, and it seems a fair inference to believe that they were sent in just because these three brothers resented what they believed to be an injustice to one of the weaker sex. If, instead of being a woman, the first name on the list of eligibles had been a man, there would have been equally an injustice in rejecting him for one lower on the list, but in that case would the daily papers have given the matter so much prominence, and would the three brothers have thought it worth while to have sent in the clippings?

It is something for us sisters to be proud of that the first on the list should have been a woman; but was her sex really the cause of her rejection? If so, why was the fourth on the list chosen instead of the second? No, if it had been *Mrs.* Haggerty instead of *Miss* Haggerty, and her liege lord had been the proprietor of a low dive to whom Mr. Schrader owed a political debt; in other words, had she been the wife of a political boss, she might have gotten the position even though she couldn't tell a queen from a white-faced hornet. The very great probability is that Miss Haggerty was rejected because O'Mara, or some of his friends, had a pull, and not because "she was a woman, and the keeping of bees was not a woman's work." Why, the very idea!

Results of the Season of 1904

Some time ago I saw that Miss Wilson wanted the bee-keepers (or their wives, rather, because all men won't write) to give an account of their success for the year's bee-business. We didn't think we did very well, but when we commenced looking around we found that we did extra well.

We had 30 colonies in the spring of 1904, and secured 1500 pounds of extracted honey, besides about 40 pounds of honey put away that we did not get around to extract (that is 40 pounds to the colony), so our bees didn't do so badly compared with what some others did.

We are right in the center of three big bee-yards, so we couldn't do very well. They are all within 2 miles. We didn't get any increase to speak of. One of our neighbor's told us where there was a swarm; I caught one myself when he was gone away from home, and that is about all the increase.

The bees are wintering well as far as I know. They are on the summer stands packed in chaff. They have had two good flights since being put away. The mice have been working on some of them, but we think they have stopped, or, rather, we stopped some of them with corn-meal and strychnine.

It has been snowing here for a week, and it looks as if we were going to have a good season for water.

The American Bee Journal is a welcome guest at our house. MRS. SADIE ELLIFRITZ.

Uinta Co., Utah, Feb. 4.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

"TO TRUST" OR NOT "TO TRUST."

"'Tis a point we long to know,
Oft its causes anxious thought,"
Do we boss our beans or no,
Have we Trust, or have we not?

If that's our frame of mind, the title page of Feb. 9 is of interest as a sort of side evidence. We hardly have an old, *long-established* trust; else there wouldn't be two such nice agencies in one city. Especially there wouldn't be two agencies in a foreign city like Havana. A recently formed trust, however, may not think best to sweep supernumerary things all off the board immediately—takes its quiet time to fix things just right in its own eyes.

SUGGESTION FOR PREVENTING SWARMING.

So G. M. Jones wants to keep 4 colonies of bees in a city, mainly for study and relaxation of mind. Yet he must be absent working-hours every day. He wants a reliable plan to keep swarms from spreading panic among his neighbors. I don't know as I can tell him; but I should hardly be living up to my reputation if I did not reel off a plan. Keep them in big one-story hives, 12 frames or more in size. For each hive have two fat dummies so the brood-chamber can readily be run any size from 3 frames to 12. Have 16 hives in all, and practice double division—that is, have 4 colonies in the spring and 16 in the fall. In the fall put the bees all in 4 hives again, and harvest your crop by extracting the 152 combs not needed to winter on. If they average 3 pounds each the harvest will be 456 pounds. Plenty of objections might be made. Unless the divisions are *very wisely* conducted there will (sad to relate) sometimes be swarms notwithstanding. And in a locality where the surplus all comes in quite early, and the fall flow is poor, the plan would be a total failure—come out with scant honey to winter 4 colonies, and most of that scattered through the 144 combs that wouldn't go in. Page 107.

SECTION FOUNDATION STARTERS DROPPING OFF.

May be P. D. Jones is right about his comb foundation dropping off because the sections were too smooth; but I suspect a little that he is barking at the wrong cat. Lots of foundation falls because the sections are just a little damp. Be sure they are dry, especially if you have poured hot water among them previous to folding. Lots of foundation falls because the weather was to cool when it was put on—wants to be just nice and warm, not too hot nor too cold. Also, there's an expert and peculiar wriggling squirm that can be given to the handle of the Parker machine that will make wax stick when a non-expert would find "breakers" ahead. Page 110.

SELLING FOUL-BROODY HONEY.

To forbid a man to sell honey because his bees have foul brood looks to me like going a little further than is best. Even if a simple sale of honey is to be penalized at all a possible two months in jail seems rather too severe. To sell foul-broody honey *to a bee-keeper*, when he presumably wants to use it for feed, might be penalized without injustice. Page 116.

BUMBLE-BEES AND HONEY-BEES—CATNIP HONEY.

Queer that bumble-bees should ignore the basswood and crowd on the alfalfa while the honey-bees totally let alone the alfalfa and rushed for the basswood! Just merely a difference of taste—perhaps.

From reports to date one might guess that pure catnip honey has far too much flavoring to be good, while a second-rate honey rather destitute of flavor is decidedly improved by a small admixture of catnip. Page 117.

POLLEN IN THE BROOD-NEST—STARTING SWARMING.

I don't believe that pollen in the brood-nest is going to do any harm as long as it keeps well. Quite liable to get damaged, and then it may do harm, especially when it gets grown into solid lumps by fungus growing in it.

I think Prof. Scholl will find that many others not in Texas sometimes succeed in getting their bees begun at the principal harvest while free from any strong inclination toward swarming. It's the general rule (I take it) that a grand rush of nectar does not favor swarming unless the bees had their minds turned that way to begin with. I will grant that this last contingency is very apt to prevail among prosperous bees that have recently passed through a hard winter. Page 117.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Black Bees—Italians or Carniolans Perhaps the Best

1. I enclose a few bees. They are the only kind here now, and I would like to know what strain they are.

2. I am a beginner, and would like to know what kind of bees are the best for this part of the country? MISSOURI.

ANSWERS.—1. They appear to be the common black bee with a very slight admixture of Italian blood.

2. You will probably do well with Italians, and perhaps with Carniolans.

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Feeding Bees—Wintering Bees—Preventing Swarming

1. I have 5 colonies of bees, 3 are in the cellar and 2 outside. Those in the cellar we put out a few days ago for a flight. The temperature was 50 degrees in the shade. They were all in good condition but one, which was short of honey. We put on a super containing a few chunks of honey before putting them back in the cellar in the evening. Is it right to feed them that way in the cellar?

2. Is it better to leave them in the cellar until spring, or give them a flight? The temperature of our cellar is about 33 degrees in cold weather.

3. I must get some new bee-hives this spring, and would like to know which are the best. I had thought of getting the 10-frame dovetailed with T tin supers that could be used with any width sections. I haven't much time to attend to the bees.

4. Will a swarm be larger from a 10-frame hive than from an 8-frame?

5. Will a colony winter better in a 10-frame hive outside and also in the cellar?

6. I can't walk across the bee-yard without getting stung. How do you account for it?

7. Would a good drink of whiskey do any good?

8. To keep the bees from swarming should all the queen-cells be cut out after swarming?

9. Will bees swarm as often from a 10-frame hive as from an 8-frame? ILLINOIS.

ANSWERS.—1. Yes, only make sure that the bees have reached the honey.

2. Having had a flight in March they will hardly need a flight again till taken out for good, say when soft maples bloom, or later, if the weather does not seem warm and settled.

3. Your choice is good.

4. In general, swarms should be larger from larger hives, but there are exceptions.

5. Yes, for one who, as in your case, has little time to give them.

6. I don't know. Possibly you have a cross strain of bees which would be improved by getting a queen of gentler blood, and possibly you are a little rough in handling them, so as to keep them irritated.

7. I don't know how whiskey would affect bees, but if it works as it does on most men, it would only make them worse. If you were to drink the stuff yourself, I should expect the smell to anger the bees, but if you'd drink enough the stings won't hurt you—say enough to make you dead drunk.

8. You may keep them from swarming if you cut out all queen-cells but one before the first virgin emerges, or by cutting out *all* cells after piping begins.

9. As a rule, no.

Your tenth question relates to the reliability of a supply-dealer. That question is just a bit outside the scope of this department, but I feel safe in saying that no advertisement is admitted into the columns of the American Bee Journal unless it is believed that the advertiser is entirely reliable for what he advertises.

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Foul Brood—Feeding—Increase—Hive-Entrance in Winter—Painted Hives

1. How early in spring can bees be treated if they have foul brood?

2. What is the best method for increase?

3. Will the bees leave dead brood in the combs over winter in any other case than that of foul brood?

4. How much sugar syrup should be fed in a day after the bees have been treated?

5. How shall I feed them, and ought it to be done in the daytime or at night?

6. I have 5 colonies of bees (one is small and queenless) that would make about 4 good ones. To what number could I increase?

7. How large ought the hive-entrance to be for wintering bees in the cellar?

8. Is it best to remove the quilt and put the cover on or not?

9. If I paint the front of all my hives different, and have the hives about 2 feet apart, will the bees know their own hives? ILLINOIS.

ANSWERS.—1. Usually no treatment is undertaken until bees are busy gathering.

2. I don't know. The best way for one may not be best for another. Study up the plans given in your bee-books, and you may be able better than any one else to decide what is best for you. If you have had no experience, natural swarming may be best. If you decide on artificial increase, you will find it very fully treated in the book, "Forty Years Among the Bees."

3. It is not likely to occur, and yet it is perhaps possible that dead brood might be left in an outside comb over winter. Of course you understand that live brood may be found in the combs in March, and sometimes as early as January in your latitude.

4. Nectar should be yielding, so that there will be no need of feeding. If a sudden dearth should occur, a colony should receive a pint or more of syrup daily.

5. If you are at all careless about starting robbing, evening is the best time to feed, but with the Miller and some other feeders you may feed at any time unless you take special pains to start robbing.

6. It will vary greatly. In a flush season an experienced hand would increase to 30 or more. In a poor season an inexperienced hand will do well to hold his numbers without increase.

7. The larger the better. Some have the bottom removed entirely. My hive-entrances are 12 by 2 inches, and I should not like to have them smaller, and yet I have wintered bees well with one-fourth as large an entrance.

8. Just as well to leave all on till time to put on supers.

9. I don't know just how much difference it makes to have hives of different colors, but it is supposed that bees recognize colors; but if there is a space of 2 feet between hives there ought to be no trouble even with the same color, especially if trees or other objects help to mark location. You can do still better by putting your hives in pairs: 2 close together, a space of 2 feet, 2 together, a space, and so on. Contradictory as it may sound, the bees will have less trouble finding their own hives in this way than when no hive is nearer than 2 feet from its neighbor.

◆

Caucasian Queens Crossed with Cyprians

Where can I get Caucasian queens? I still have those mean bees, which no one dares to go near. I believe I have requeened 3 times from the black bees to the present "hornets," and they get worse, it seems to me. Will a cross with Caucasians and these hornets (mostly Cyprian blood, I think) be a good stock? I must get gentler bees, or quit. SOUTH CAROLINA.

ANSWER.—I don't know where you will get Caucasian queens, but from what you say about your bees the probability is that they would be improved by a cross with Caucasians, or with *anything else*. Very soon you ought to find advertisements of different queens, and I would not be discouraged yet, even if previous attempts in changing blood have not brought desired results.

◆

Bees Hiving Themselves—Italianizing—Laws Against Spraying

I am an amateur bee-keeper—just bought the first 2 colonies of black bees in box-hives; and I have just received my second copy of the American Bee Journal, with which I also secured Prof. Cook's "Bee-Keepers' Guide" and Newman's "Bees and Honey." I want all the information I can obtain in regard to bees, and as I can not find all that I desire in the literature which I have, I want to ask a few questions.

1. I bought the 2 colonies of black bees merely to gain experience before investing heavily in Italians. I intend to use the Danzenbaker hive, as from what I can read I infer that it is the best for comb honey. If I place an empty hive near the old colony, will not the new swarm be quite likely to enter it of their own will, instead of flying off a long distance to a less desirable home in a hollow tree? If this plan has never been tried it may prove successful in a large percentage of cases, and, if so, it will save a great deal of trouble.

2. Has a bee-keeper in New York State any redress if a neighbor kills his bees by spraying poisonous substances into fruit-blossoms when trees are in full bloom?

3. Several apiaries have been entirely destroyed in this town in this manner. So many bee-keepers have given [illegible] fruit-growing district that I concluded to try it. For this reason do you not think that I was wise to buy cheap, common bees to experiment with the first year?

4. If I meet with success with my small venture this year, what is your advice as to going into the business on a large scale?

5. Would you advise me to Italianize by introducing first-class queens? or would you entirely destroy all the common bees and buy full colonies of Italians?

6. If I introduce a first-class, high-priced Italian queen into each colony of the blacks, will they gradually merge into pure Italians, or will they be hybrids?

7. I can sell all the fine comb honey I can produce at a good price, if I have it in one-pound sections. Do you advise the use of the Danzenbaker hive for this purpose?

8. How many colonies of bees could I keep successfully on 5 acres of land covered with fruit-trees and clover?

I am entirely ignorant regarding bees and bee-keeping. I never owned a bee, nor had anything to do with them before in my life, and

I want to learn to attend to the business according to the latest improved scientific principles. NEW YORK.

ANSWERS.—1. It would be a great convenience if bees would hive themselves when everything is made ready for them. Unfortunately, they are more likely to prefer a hollow in some place difficult of access, a mile or so away. I'm not sure that I ever heard of a swarm voluntarily entering a new hive (lots of such opportunities have been offered), although sometimes they enter a hive containing old comb.

2. Yes, I think New York State has a law against spraying, by which you can be be protected.

3. It doesn't matter greatly. If you could buy Italians near home it would be better to begin with them. If you have to send a long distance, expressage is so expensive that you would better buy any kind you can get near home, changing the stock later.

4. Whether you make a big success or a failure this year, try it on a little larger scale next year. Better grow into the business than to jump into it. If you succeed for about 2 years you can then grow very fast.

5. Whatever you do, don't think of destroying any bees. It may be right sometimes to kill a queen, but never a colony of workers, unless it may be badly diseased.

6. If you get a black colony to accept an Italian queen all her progeny will be the same as if you put her in an Italian colony. As soon as the black bees die off (and the life-time of a worker is only about 6 weeks in the working season) the colony will be full-blood Italian.

7. I prefer the regular Langstroth dovetailed hive.

8. Perhaps about 10 colonies, if you have each bee picketed so it can not get off the 5 acres. But if the bees are allowed free flight, so they can fly 2 miles or so in all directions, and there are no other bees in that distance, very likely you can keep 100 colonies successfully.

You're on the right track; do a lot of reading and thinking, and go at least a little bit slower than you think best at increasing.

Reports and Experiences

Still Clear and Cold

The weather is still clear and cold here, from 6 to 10 below zero every morning, and no signs of a change. There has not been a day since bees went into winter quarters that they could fly in the open air with safety.

IRA BARBER.

St. Lawrence Co., N. Y., March 17.

Loss of Bees on Summer Stands

I lost half of my bees the past winter by leaving them on the summer stands. I expected to put them in the new cellar, but did not have it ready in time. It will be all ready for next winter.

Please tell Cora L. Hazard for me that—

The roving bee is not the "he"—
The "he's" the other fellow.
And, Cora, dear, don't interfere
With gathering gold-dust yellow;
Nor steal her sweet of honey-bloom,
Or "she" will make you bellow.

H. W. CONGDON.

Monona Co., Iowa, March 20.

Outdoor Wintering of Bees

I have been looking over my colonies, and find that they are all alive except one, which is queenless. I have always wintered them on the summer stands, and have never had any serious loss. A year ago this winter most of the bees in this section were killed. I lost but 3 colonies at that time, and one died from lack of stores.

I shelter them from the cold west and north winds with a few bundles of corn-stalks. After every snow or wind storm that blocks the entrance, I see that it is opened. What they need is an abundance of fresh air. When I know they are getting that, outdoor wintering of bees has no terrors for me.

GEORGE MITCHELL.

Cook Co., Ill., March 6.

Hard Winter on the Bees

I always winter my bees on the summer stands, and they generally come through all right if they have plenty of stores. I put

DEATH TO LICE.

LOSS BY LICE
on poultry amounts to many times the cost of **Lambert's Death to Lice**—the sure preventive. Loss can be saved and profit made by its use. Frees sitting hens from lice without harming eggs or chicks. A trial 10c box will prove it. 100 oz., by express, $1.00.
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Our illustrated catalog tells why they are best. It's *free*. Write.
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We wish to say that we are now loaded with a big stock of **Fine Bees and Queens** ready to mail now; no delay; send for what you need at once.

We breed the 3 and 5 banded Italians, Cyprians, Carniolans, Holy Lands, and Albinos, in their purity, in separate yards from 5 to 30 miles apart.

Tested queens, $1.25 each; Breeders, $3 to $5 each. Untested, from either race, 75 cts.; 6 for $4, or $7.50 per dozen.

Full colonies, 1, 2 and 3 frame Nuclei cheaper than you ever bought good stock for before. No better to be had. Write for price-list **FREE.**

Safe arrival and perfect satisfaction guaranteed or your money returned. Prices of Queens to dealers, or in large lots on application.

We can sell you **BEE-HIVES** of yellow pine at about half the cost of white pine goods. Get our prices before you buy.

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W. ATCHLEY, Mgr.
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BLOODED STOCK, BOX 221, OXFORD, PA.

them away last fall in better condition than usual, but it turned very cold, and I don't think the ground was clear of snow for two months. About half of the bees ate all of their honey, and were dead when it got warm enough for them to fly out again. I think we had more snow this winter than in any other 3 winters put together.

I had 45 colonies when swarming-time was over last season, but I doubled up some and killed 3 for the honey. I did not get any surplus last year, but I thought the bees had plenty for winter stores. I now have about 21 colonies, having lost 13. I think the cold weather caused them to eat their honey up so fast.

I think the "Old Reliable" has improved this winter. Guess it's the cool weather.

J. K. HUNTER.

Overton Co., Tenn., March 4.

Shipping and Selling Comb Honey

EDITOR YORK:—From some quite expensive experience I have had the past winter I want to say that you and Mr. Muth have each overlooked the one thing (see page 227) that caused the lot of honey to arrive as it did, namely, the cold weather.

Early in December I had occasion to ship by express, 28 miles, 56 cases of comb honey, crated. It was loaded very carefully, and I was at the unloading point to deliver it to the dealer. It was hauled on a spring wagon, and properly loaded, yet there were some broken

PHONE NEWS
FOR FARMERS

GREAT ACTIVITY AMONG FARMERS

Everywhere farmers are awakening to modern ideas.

Just now there is great activity among farmers in establishing and building telephone lines all over this country. The telephone saves time in getting help in a hurry; keeps the farmer in touch with the markets at all times, and in case of emergency gets assistance from neighbors or the city without delay. The building of private and party lines has been so simplified and cheapened by the introduction of

Stromberg-Carlson Telephones

that every neighborhood, no matter how small, can well afford its own telephone line.

For farmers lines none but the best telephones will do—instruments that are practically perfect, that do not require constant adjusting and "tinkering" to keep them talking right. There are many telephones offered to farmers that are actually not fit for such service. It pays to get good instruments at the start. Stromberg-Carlson Telephones meet every need of the farmers line. Write for book F 80 "Telephone Facts for Farmers" how to organize your neighbors and build a line. Ask for book 80 telling how successful lines have been built.

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2A16t Please mention the Bee Journal.

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Hardy varieties; yield big crops. Grafted Apple, 4½c; Budded Peach, 3½c; Black Locust Seedlings, $1 per 1000; Concord Grapes, $2 per 100. We pay the freight. Catalog, English or German, free.
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Box 99, Beatrice, Neb.

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WALTER S. POUDER,
513-515 Massachusetts Ave., INDIANAPOLIS, IND.

Please Mention the American Bee Journal when writing Advertisers

combs in the front rows of sections, when unloaded from the express car and more of them when unloaded from the express wagon. The honey was frozen.

I have shipped thousands of pounds of crated honey in warm weather with no damage, at distances of 400 to 1300 miles.

The moral to both Mr. Muth's letter and this is, *Don't* ship comb honey during freezing weather.

With reference to L. V. Rickett's article, (page 229) I wish to say this:

In my locality we have trouble in getting 4¼x1⅞ sections to weigh enough so that 24 No. 1 sections will weigh 22 pounds, on an average, when placed between separators while the honey is being built. Across the country 8 miles from here the bee-keepers must use sections of 1¾-inch width in order to keep them from weighing over 23 pounds per case of 24 sections.

As our market demands an average of 22 pounds per case of 24 sections of No. 1 honey, will Mr. Ricketts please name one size of section for those two localities?

Notwithstanding the fact that Mr. Ricketts has had far more experience in retailing honey that I, I can't help believing that when a customer buys a light section of honey by weight, and pays according to the weight he gets, that customer is satisfied with his purchase; in fact, many prefer a light-weight section, as it costs them less (when bought by weight), and is plenty for the occasion for which it is bought.

I believe in putting honey up to suit the large buyer, but want honey sold by weight so far as the bee-keeper and retailer are concerned. Let the middlemen do as they see best. LEO F. HANEGAN.

St. Croix Co., Wis., March. 24.

[Of course, it is well known to all who have had any experience that it is extremely risky to ship comb honey at all in very cold weather, on account of the great brittleness of the comb when cold. But whether shipped in warm or cold weather, it is best to have comb honey packed properly, so it can be handled with as little danger of breakage as possible. —EDITOR.]

Keeping Bees on a Roof

I have a roof-apiary 16 feet from the ground on top of a wagon-shed. The bees do not sting the horses, nor the people that pass, and they store as much honey as those on the

20th Century Wonder Made entirely of metal and asbestos—fireproof. The **CYCLE HATCHER** is wonderfully efficient. Fifty egg size $5.00. Catalogue free.
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Untested Queens, 85c each; Tested, $1.25 each. Untested, after April, 75c each; or $8 per dozen; Tested, $1 each.

I rear only the three and the five banded Italians. **DANIEL WURTH,**
1111 N. Smith St., SAN ANTONIO, TEX.
☞ Please order from these prices to save correspondence. 14E2t

H. M. ARND, Manager.

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Best and Most Direct Shipping Point in the World.

Having decided to add Bee-Keepers' Supplies to our honey-business, we have arranged with the well-known **G. B. LEWIS CO.** to handle their full line of **Popular Beeware** in Chicago. We will sell at their regular prices.

Catalog and prices on Honey on application. If you want **Good Goods at Factory Prices and Prompt Shipment,** send your orders to the
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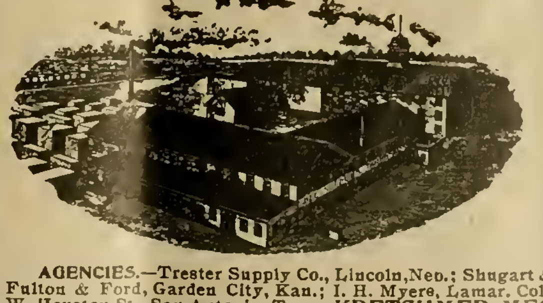

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One untested queen.....	$1.10
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SEND TO
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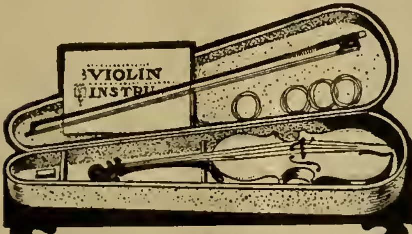

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A good substantial Violin in a heavy, well-made pasteboard case, including Bow, Rosin, Pitch Pipe, Mute, Set of strings, etc.

We make the broad claim for this outfit that no retail dealer in the land can duplicate it for less than double the price we charge. And when we say "a good substantial Violin" we mean just what we say. It is not a toy or plaything, but an instrument well made, built to produce music, and just the thing for the beginner. Has good clear tone and will be a big surprise to any one wishing a violin.

Write for one, also ask for our free catalogues of "Everything Musical" from the cheapest to the best, for the Band and the Orchestra. If you want a violin costing anywhere from $25 up, we will send you 5 to select from. We carry an immense stock; being importers and wholesalers, we can supply any demand at prices that mean money saved to buyers. Sheet music catalogues mailed on application. Bargains in SECOND-HAND and shop-worn instruments; send for list. Address

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I have 50 colonies of Bees in good condition. The hives are all in pretty good shape, almost as good as new, having been in use only a few years. Price, $3.00 per colony. Address,

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Headquarters for Bee-Supplies

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COMPLETE STOCK FOR 1905 NOW ON HAND.
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AS ALL FREIGHT
NOW GOES THROUGH CINCINNATI.

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Satisfaction guaranteed.
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At Root's Factory Prices

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Office and Salesrooms, 2146-48 Central Ave. Warehouses. Freeman and Central Aves.

Honey and Beeswax

Chicago, March 8.—There has been somewhat of an increase in the number of sales during the past 4 weeks, yet the volume has not been large, while prices are if anything lower than in January, especially on other grades than white clover. Fancy grades of white comb bring 12½@13c; No.1, 12c, with some off in color at 11@11½ cents; amber grades slow at 8@10c. Extracted, white, 6@7c; amber, 5½@6½c; the price being governed by quality, flavor and package. Beeswax, if clean and good color, 30c per pound.
R. A. Burnett & Co.

New York, March 11.—There is no improvement in the comb honey situation. The demand is next to nothing; quotations nominal and no doubt some of the stock will have to be carried over. We quote fancy at 13c; No. 1 at from 11@12c, and dark at from 9@10c. Extracted is in fair demand: White at from 6@6½c; light amber at 5½c; Southern in barrels from 50@57c per gallon, according to quality. Beeswax firm at 29c.
Hildreth & Segelken.

Boston, March 9.—The demand for comb honey still continues light with heavy stocks on hand Fancy white, 15@16c: No. 1, 14c. Extracted, 6@8c, according to quality.
Blake, Scott & Lee.

Kansas City, March 31.—The honey situation does not improve. While there is a little better movement the prices seem to be lower. Fancy white brings $2 a case; No. 1, $1.75; amber and lower grades from $1.25 to $1.50. Extracted, 4½@6c. Beeswax, 28c.
C. C. Clemons & Co.

Cincinnati, O., March 20.—The comb honey market has been a drag the last month; this caused the holders to offer extra inducements in prices. Quotations obtained are as follows: No. 1 fancy water-white comb, 12@13c; No. 2, 10½@11½c. Extracted: white clover in barrels, 6½c; in cans, 7½@8 cents; amber, in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c.
C. H. W. Weber

Philadelphia, March 22.—As the season advances, the call for honey is decreasing, and the market at the present time is dull. Some few sales. We quote: Fancy white, 13@14c; No. 1, 11@12c; amber, 11c. Extracted, white, 6½@7c; amber, 5½@6c. Beeswax, 28c.

We are producers of honey and do not handle on commission.
Wm. A. Selser.

Albany, N.Y., Feb. 8.—Honey market dull this extreme cold weather, especially comb, which candies or granulates and cracks easily. We quote: Fancy white, 13@14c; No. 1, 12@13c; mixed, 10@11c; buckwheat, 10@11c. Extracted, better demand: Buckwheat, 6@6½c; white, 6@6½c. Buckwheat most in demand, as the Jewish people will have no other. Beeswax, 30@32c.
H. R. Wright.

Cincinnati, March 10—There is little, if any, improvement in the honey market here, since our last quotation. We hope to render a more encouraging report soon. We quote amber extracted honey in barrels and cans at 5½@6½c. White clover at 7@8c. Fancy white comb at 12@13c. Beeswax, 28c.
The Fred W. Muth Co.

San Francisco, March 22.—White comb, 1-lb. sections, 11@12 cents; amber, 8@10c. Extracted, white, 6@6½ cents; light amber, 4½@5½c; amber, 3¾@4¼c; dark amber, 3@3½c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

Inquiry is not brisk and market is easy in tone, especially for other than most select water white. Spot supplies are not heavy, but there is a general desire to effect a clean up of holdings in the next 60 days, as by the end of that time new crop honey is likely to begin to put in an appearance.

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Never Go Out
And last from 5 to 21 years

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Original
Direct Draft
CLEAN
Bee Smokers

Pat'd 1878, '82, '92 & 1903

Tin 4-in. Smoke Engine 3½-inch 3-inch 2½-inch 2-inch Wonder
$1.50. $1.10. $1.00. 90c. 65c—per mail.

Sent on receipt of price per mail.

T. F. BINGHAM, Farwell, Mich.

Otisville. Pa., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine.
Fred Fodner.

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Fred W. Muth Co., Cincinnati, O.
Norris & Anspach, Kenton, O.
A.G. Woodman, Grand Rapids, Mich.
York Honey & Bee Supply Co., Chicago, Ill., 141 & 143 Ontario St.
Louis Hanssen's Sons, Davenport, Iowa.
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Southwestern Bee Co., San Antonio, Tex., 438 W. Houston St.
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Arkansas Valley Honey-Producers' Association, Rocky Ford, Colo.
R. C. Aikin, Loveland, Colo.
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45th Year. CHICAGO, ILL., APRIL 13, 1905. No. 15.

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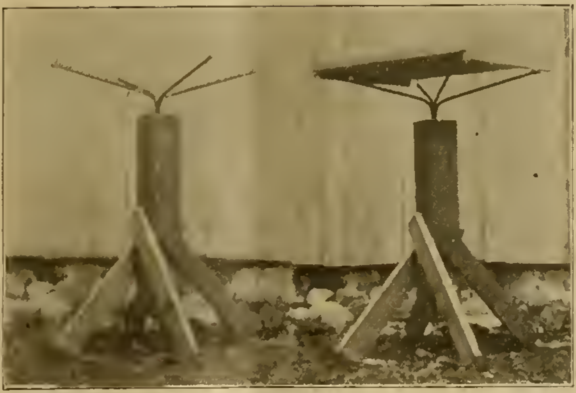

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(See page 277.)

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should read GLEANINGS IN BEE CULTURE. It gives you the latest in the apicultural world. If you have honey and wax for sale it tells you the market prices. If you have troublesome questions to solve, it helps you. The very best bee-keepers write for it. The following noted writers contribute regularly:

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* * *

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We are certain that any one interested in bees would be greatly benefited by becoming a subscriber to GLEANINGS IN BEE CULTURE. We want you to give it a trial. After you have received a few numbers we are sure you will become a permanent subscriber. We therefore make a special trial offer of 6 months for 25c. Fill in your name in space below, remit 25 cents, and the paper will begin at once.

Enclosed find 25 cents, for which send me Gleanings in Bee Culture 6 months.

NAME ....

P. O. ....

COUNTY ....

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Root's Goods in Chicago.

For the saving of freight for our western trade, as well as to give much quicker delivery, we opened a branch office in Chicago, Oct. 1, 1903. The following taken from our catalog of last year, explains the transfer then made:

The business for many years conducted by George W. York & Co., at 144 E. Erie Street, as agent for The A. I. Root Company's supplies, is this day transferred to The A. I. Root Company, to be conducted as a branch office. Please note change of name to avoid confusion in our work. THE A. I. ROOT CO.
October 1, 1903.

To Our Customers and Friends:
In transferring back to The A. I. Root Company the bee-supply business, which we took over from them some years ago, we do so with regret, as we have labored hard to build up a large and honorable trade in bee-appliances, and value beyond expression the valuable patronage accorded us during the years. We trust the same will be continued to our successors in the business.
GEORGE W. YORK & CO.
Chicago, Ill., Oct. 1, 1903.

The conveniences offered by the branch office were evidently appreciated by the bee-keepers of Illinois, Wisconsin, and other States beyond, for the business done by the branch was much beyond our expectations. During the rush season—April, May and June—orders came in so fast that, in spite of frequent orders to the factory for another car of goods, the stock ran low, and some delays and annoyances thereby were caused. Some little confusion because of change of name and manner of conducting the business (from agency to branch office), but these have all been overcome. We are better than ever prepared to handle your business carefully and promptly, and solicit your patronage.

Low Freight and Quick Delivery.

A glance at any railroad map will show the superiority of Chicago as a shipping-point. Because of the great number of railroad and steamboat lines centering in Chicago, and the large stock of goods we carry, we can give you the best of service. This office is in constant touch with the factory and home office, and in many cases can give your order quicker attention and earlier shipment than the factory, to say nothing about the saving in time and transit and lower transportation charges.

Wholesale and Retail.

We are prepared to furnish goods at wholesale and retail, the same as the home office.

Terms.

Our terms are cash with the order. We pay cash for material, and pay our helpers cash every week for their work; therefore we must have cash in advance for the goods furnished. Do not ask for credit.

Beeswax Wanted.

We are in the market for good beeswax the entire year, and pay the same prices as quoted by our home office in each issue of GLEANINGS IN BEE CULTURE. Send your wax direct to us for cash or in exchange for supplies.

Extracted Honey.

In the course of a year we use large quantities of extracted honey, and are pleased to get sample and prices from parties who have honey to exchange for supplies. We are also prepared at all times to furnish first-class honey to any one who is in need of same, either bee-keepers who have a demand for more than they can furnish, or from dealers. Get our prices before you place your orders elsewhere.

DANZENBAKER HIVE.

"Facts About Bees", a 64-page book written by Mr. F. Danzenbaker, giving a complete description of his famous hive and directions for using. Full of valuable information. Sent on receipt of a 2-cent stamp to pay the postage. Send for it.

The Danzenbaker Hive
THE COMB-HONEY HIVE.
Three Points of Excellence:
QUALITY
You can produce better-looking honey.
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You can produce more of it.
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You can get more per pound for it.

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The great popularity of the Danzenbaker hive has brought the shallow brood-frame and the tall plain sections into prominence. It must be remembered that no other hive contains the essential features of the Danzenbaker. The success of this system depends on having everything JUST RIGHT, so you should place your order for the Danzenbaker hive with our office, or any of our branches or regular agents.

Address all Orders, Remittances, Inquiries, etc., to
THE A. I. ROOT CO., 144 East Erie Street, Chicago, Ill.

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GEORGE W. YORK, Editor. CHICAGO, ILL., APRIL 13, 1905. Vol. XLV.—No. 15.

Editorial Notes and Comments

The Honey-Producers' League

In last week's issue we devoted much space to this new organization for bee-keepers, which, it is hoped, will prove to be a valuable one. As its Constitution says, its objects are to create a larger demand for honey through advertising, and also to counteract the evil influence of misrepresentations of honey by correcting them.

It was stated that when there is $5000 in the League's treasury, the advertising would begin. Last week we reported already over $1000 on hand. And this week we have more to report. It is hoped that by May 1 the full initial amount will be in hand, so that operations may be commenced.

To show how The Honey-Producers' League is being received, we give herewith a few extracts from letters received by its Manager:

> The plan of the League meets our entire endorsement.—The Kretchmer Mfg. Co.
>
> We must say that such a thing has long been needed, and we trust it will do a great deal of good.—John Doll & Son.
>
> I believe the project is a good one; at least it is worth giving a good trial.—E. Whitcomb.
>
> We think The Honey-Producers' League a commendable undertaking, and should be glad to lend what assistance we can.—W. T. Falconer Mfg. Co.
>
> I think The Honey-Producers' League is a move in the right direction, and its work, to be most helpful to honey-producers this year, should begin at once.—(Mrs.) Clara West Evans.
>
> The Honey-Producers' League Prospectus and Constitution just at hand. I have shown it to Mr. Clark, and he, with myself, think we would better throw our lot in with it.—G. M. Doolittle.

We might give more such expressions, but the fact that people are putting in their dollars is proof enough that they believe thoroughly in the proposed work of the League, and want to put "their shoulders to the wheel" and thus help move things. It ought to have 1000 members by May 1. Like every other organization, The Honey-Producers' League has a few objections to meet. But such should not discourage any one.

In the first place, let us say that none of its originators for one moment thought that it was to take the place of the National Bee-Keepers' Association. The National has done a great work, and still has much to do. It is a social organization also, while the League is all for business.

The Manager has received a very few letters saying something like this: "When the League gets ready to advertise, let us know, and we will send in our dues." Or, "When the League has nearly the $5000 to start advertising with, I will send in my annual dues." But we do not see why some should pay their dues right away and others be waited on. *Everybody* should pay *at once*, so that the necessary $5000 will be on hand quickly. Surely, if some have faith enough in the League to have paid their $25 or more already, it would seem that others whose dues will not be more than from $3 to $5 should pay promptly also.

It has been suggested that those who do not become members of the League will reap as great benefits as those who join and pay their money. Hardly. They will really suffer from the feeling that they have failed to live up to their duty and privilege. This is a work in which *all* should co-operate. The expense is not great, but the prospects of good returns are inestimable.

Spring Troubles with Cellared Bees

Spring is especially the time when the cellarer envies the man who need not give a thought to the question of the right time to take out his bees because they have never been taken in. Often there is a painful uncertainty as to whether bees should be taken out or not. If one could only know what is before one in the shape of weather. A bee-keeper in Northern Illinois writes:

> "How the seasons do vary. One year we had deep snowbanks still left the last of April. This year we have the appearance of spring fully established in March. For days it has been mild; March 28 the thermometer stood at 75 in the shade, while in the cellar it was 62, with the bees roaring in a distressing manner."

"But why did the man leave his bees in the cellar when it was so warm?" asks a man in the South. That's just the trouble; he doesn't know what is to come, and if he puts his bees out he may have to wince under two weeks of freezing weather. So he thinks,

"Better to suffer the ills we have
Than fly to those we know not of,"

and leave his bees in the cellar till a little more sure warm weather has come to stay. There may be no more severe weather, and there may be a lot of it, and how is he to tell?

It might help matters a little if we could have a decided answer to the question whether or not it is wise toward spring to take bees out for a flight and then return them.

Another Comb-Honey Misrepresentation

In the New York Tribune for Feb. 19, it was stated that "honey is also adulterated in the comb, the comb being made in part of paraffin and saturated with a mixture of glucose and syrups." A protest was sent in by the American Bee Journal, and no doubt by a number of others. The Tribune of March 5 gives a letter from Editor Root, of Gleanings, and a reply thereto, the whole occupying about a column, but in that column there is no hint of any modification of the statement—only pains taken to justify it.

It is not likely that so able a periodical as the New York Tribune is desirous to mislead or misstate, and the probability is that when the statement was made it was believed to be correct. Having been made, it is only human nature to give full weight—and a little undue weight—to anything found to favor such statement. After giving proofs that it probably believes are satisfactory, it concludes by saying:

> In offering his reward of $1000, Mr. Root specifies in his letter that the comb honey must be shown to have been "manufactured out of paraffin by any mechanical process known to science or the arts, filled with glucose, and put on the market as comb honey." Such specifications are of course prohibitive. He demands that a wholly artificial product be brought to him. No one says that comb honey can be completely counterfeited. Adulterations are not wholly spurious. Adulterated olive oil is not all cottonseed oil. It has been shown, however, that honey may be adulterated in the comb with glu-

> cose; that combs may be artificially formed by furnishing the bees a foundation; that this foundation may be adulterated, and that paraffin is one of the chief adulterants.
>
> In the reward card which Mr. Root sends out, and which he says in his letter he has "published for the last 15 years," he still further safeguards himself with conditions. The reward is only for one "who will furnish evidence that comb honey has been manufactured, filled with honey and capped by machinery, or who will furnish information of any place where comb honey is manufactured by machinery—in either case the product imitated so closely as not to be told from the genuine."
>
> Comb honey sold "in the frame," of which The Tribune made no mention, is uniformly pure in this country. Nevertheless, honey-makers should appreciate that it can only remain so by constant watchfulness. They should welcome instead of criticise any public discussion of the subject. The art of adulteration is on the increase in this country, and is aided by every new discovery in the sciences. As Dr. Wiley says:
>
> "The true friend of the apiary interests of the country is not he who shuts his eyes to patent adulterations, but rather he who recognizes facts, even unpleasant, and who, having seen the enormity of the extent of honey-adulteration, supports the labors of those who seek to detect and prevent it."

Bee-keepers as a class are an intelligent set of men (and women), and as such they are not likely to close their eyes to facts, unpleasant though the facts may be; but they do desire that what are given as facts shall not directly or by inference give impressions that are false. One trouble in the case is a lack of thorough knowledge on the subject. The proof of that lack lies in the phraseology used in some parts of the discussion, and also in the arguments used. In all fairness it should be said that The Tribune has been no doubt misled by statements made by those supposed to be good authorities, which statements would probably not have been made just as they were by any fully familiar with the entire facts.

Even with this admission it is a little difficult to admit the relevancy of a passage like the following:

> That the honey-comb, as well as the contents of its comb, may be more or less artificial is a well established fact. Dr. Wiley speaks of 15 patents that have been issued for the manufacture of artificial comb and comb foundation. One is described as follows: "The comb is made complete of a web of paper, cloth or suitable material, which, after moulding, is saturated with melted wax. The excess of coating is thrown off by a centrifugal machine. The advantage arising from my invention, says its author, 'is that combs constructed accordingly can be filled and emptied repeatedly without breaking, the honey being extracted by means of a centrifugal machine, or as commonly done with other honey-combs when it is desired to use them a second time.'"
>
> Another patented method, according to the inventor, will produce a comb in every respect resembling the natural comb built by bees. "This comb," says the inventor, "may be placed in the hive and will be used by the bees, thus saving the insects the labor of building combs and causing them to spend the time otherwise appropriated to this work in the gathering and storing of honey."
>
> It is in these comb foundations, these artificial layers of wax, which some apiarists place in the center of the frame for the bees to build on, that opportunities are offered for adulteration.

Now what has that to do with the case in hand? Supposing its relevancy, what about its reasonableness? Imagine "a web of paper or cloth" moulded in the form of a complete comb! Pretty thin cloth would be needed to be no thicker than the thin cell-walls of a honey-comb. And how could it possibly be so molded? Would there not be some danger of tearing the cloth before it could be stretched or squeezed into the right form? Then when the complete form is moulded, it is to be saturated with melted wax! Can you imagine such a structure being dipped in wax hot enough to saturate it without the collapsing of the cell-walls? And suppose there is no such collapsing from the immersion in hot wax, in what shape would the fabric be when "the excess of coating is thrown off by a centrifugal machine?"

All this sounds very funny to a bee-keeper, but very likely thousands have soberly read it in The Tribune without seeing anything funny about it. Can The Tribune or Dr. Wiley furnish a sample of anything of the kind? The fact that a claim has been made for it is not greatly to the point. A lunatic may conceive any absurdity and claim a patent from the patent office.

The second patented method produces "a comb in every respect resembling the natural comb built by the bees"—note well, "*according to the inventor*." It is safe to say there would be no such resemblance "according to" Dr Wiley or "according to" the editor of The Tribune. Equally safe to say that neither of them have ever seen anything of the kind, nor any one else.

Prof. M. A. Scovell is reported as saying: "No. 103, labeled 'Choice Comb Honey,' is another instance of the sale of comb honey which is a mechanical mixture of the comb with glucose." That probably has reference to honey in glass, a piece of comb honey being put in and the jar then filled with glucose. Several other cases are reported that seem to be of the same kind. That sort of fraud is well known, but what has that to do with adulterated comb honey? So far as has ever yet been reported, the piece of honey put in is genuine comb honey, the only fraud in the case being the glucose that is poured around it.

Some pains is taken to prove that beeswax is adulterated, a thing well known, but, "according to Dr. Wiley, no comb foundations have been obtained by his men in the United States which were found to be adulterated, but he publishes a letter from a Canadian chemist which shows that it can be done." It doesn't need a letter from a Canadian chemist to show that foundation may be made of adulterated wax, any more than it needs a foreign letter to show that sugar and sand may be mixed, but it is a compliment to United States manufacturers of foundation that Prof. Wiley has not found that they have been guilty of adulteration.

The passage that has the most direct bearing on the case comes earlier in the editorial, and is as follows:

> When Mr. Root said that this statement "is absolutely untrue," he was no doubt unaware that it was founded on various government reports. That some honey is adulterated in the comb is a fact stated in Part 6 of Bulletin No. 13, issued by the Department of Agriculture, Division of Chemistry, Feb. 23, 1892. As a result of a thorough analysis Dr. H. W. Wiley, chief chemist of the department, in that report said: "Many samples of comb honey containing only glucose have come under my observation, but in all these cases the combs, presumably after the separation of the honey by centrifugal machine, had been placed in glass bottles and the glucose then added. I have never yet found a sample of comb honey, sold in the frame, which was artificial, except in the use of comb foundation."
>
> In The Tribune's article no mention at all was made of comb honey sold "in the frame." The exact words used were, "honey is also adulterated in the comb," which is accomplished, as Dr. Wiley explains, by expelling the honey from the cells by means of whirling it about at a high rate of speed, and then placing the empty comb in bottles where the glucose is added.

The idea of filling an empty comb with glucose by plunging the empty comb in a bottle of glucose makes a bee-keeper gasp. "Presumably." By the same token, "presumably" Dr. Wiley never found a piece of spurious comb honey in a bottle of glucose. "Presumably" it was genuine comb honey surrounded by glucose, or simply a piece of honey-comb immersed in glucose.

Emphasis is laid upon the point that no mention is made of comb honey sold "in the frame." But is it supposable that the genius which could produce a piece of comb honey out of the frame not distinguishable from the genuine would balk at the task of putting it in the frame? And whatever may have been said, or not said in the former article in the editorial before us, the general reader will find ground for believing that spurious comb honey may be found "in the frame," when he reads in a passage already quoted that it is in these artificial combs "which some apiarists place in the center *of the frame* for the bees to build on that opportunities are offered for adulteration."

Yet suppose that The Tribune knows that all section honey, or as he puts it, that all honey "in the frame" is genuine, when he says "honey is also adulterated in the comb," whatever reservations may be in his own mind, the impression made on the mind of the general reader will be such as to make him conclude that *any* sample of comb honey may be adulterated.

In the passage quoted, The Tribune, speaking of Mr. Root's $1000 offer says, "Such specifications are of course prohibitive." In the light of what has been advanced by The Tribune, let us see how much there is prohibitive about them. There is a method which "will produce a comb in every respect resembling the natural comb built by the bees." The material used is not specified, but if such comb can be made of beeswax it can be made wholly of paraffine. Then "placing the empty comb in bottles where the glucose is added," we have the comb honey entirely artificial, complete all but the sealing, and surely The Tribune would not ask Mr. Root to accept as a marketable article a sample of comb honey not capped over. True, it is not "in the frame," but the specifications do not require that it shall be "in the frame." The specifications were meant to be prohibitive, *are* prohibitive, as is proven by the fact that no one has ever yet been able to lift the reward, but there is nothing unfairly prohibitive in them, as The Tribune will find if it can "deliver the goods."

Among the bee-keeping readers of The Tribune there may be those who will vote the editor lacking in intelligence, and some perhaps will call him dishonest in his statements. There is no proof that he is either. His position is sufficient warrant for the belief that he is a man of exceptional ability and intelligence, sincerely desirous to get at the truth, and perhaps the last man to be willing to do an injustice to an honest industry; but with the testimony before him, in a field with which he was not entirely familiar, he no doubt felt warranted in concluding that it was a more or less common thing to find on the market that which was sold for comb honey that was not genuine comb honey at all.

Let him do a little investigating on his own account. Let him make the effort to find a single specimen of comb honey that is not genuine, no matter whether "in the frame" or not—waive that—it ought not to be so very hard for him to secure it if such a thing is to be found at all; and when he has concluded his search he will no doubt be ready to say, "Comb honey, whether sold in the frame or out of the frame, is uniformly pure in this country." If, however, he should succeed in finding a bogus article of comb honey, let him send a sample to this office, and he may rest assured there will be no blinking of the truth, but the facts will be stated in all their glaring unpleasantness.

Apiarian Representation in Australia

Increase of colonies increases a man's voting power in the New South Wales Bee-Farmers' Association, according to the Australian Bee-Bulletin. If he has only one colony he has one vote, and the same if he has 50 colonies, but each additional 50 colonies after the first 50 gives him an additional vote. With 100 colonies he has 2 votes; with 500, 10 votes; and with 1000, 20 votes.

Miscellaneous News ✣ Items

A Bee-Department that Means Something.—Agricultural papers are more or less in the habit of publishing in what purports to be a bee-department, items containing errors that even a novice in bee-keeping instantly detects, raising the question, If bees are of enough importance to demand attention, are they not of enough importance to have some one of practical knowledge about bees to have a supervising care over what is said about them? A pleasing exception is found in the case of "Irrigation," of Denver, Colo., a monthly agricultural journal of high order, beautifully printed and illustrated, which, in its January number, gave a displayed announcement on its title page that with that number began a bee-department to be edited by no less an authority than our old friend, R. C. Aikin. More power to his pencil.

* * *

The Apiary of M. W. Harrington, of Iowa Co., Iowa, appears on the first page. When sending the picture he wrote thus:

> The hive in front is an observation hive with glass sides, which are covered with wooden shutters as shown in the picture. For convenience in handling and shading I have used the straight rows, more or less crowded, for 25 years. While I think I lose a few more queens by crowding this way, it a good deal more than makes up for loss in the handling, shading, stands, etc. M. W. HARRINGTON.

* * *

Conrads' Stand.—On the first page are two views of a stand used by Wald. C. Conrads, of Comal Co., Tex., who describes it and its use as follows:

> I send two views of a stand that I use for holding supers, covers, etc., while painting. Any bee-keeper can have one made by a blacksmith. Take 4 iron rods about 15 inches long by ⅜ thick, and have them welded together about 3 or 4 inches at one end; then bend them apart so that they will be a little wider than the inside dimensions of the supers; then split them at all four corners about ½ inch, and bend these two points at right angles, so that the projections pointing upward will just fit into the inside of the supers or hives, while the projections pointing sidewise will support the supers or hives.
>
> This same stand is very convenient for painting covers or bottom-boards, but if used for this purpose the projections pointing upward should all be filed to one level, so that the covers or bottom-boards may rest on them while being painted.
>
> The rest of the stand is made of wood, and in the middle of the center piece a hole is bored so that the 4 iron arms will fit into it where they are welded together; however, this point should be drawn out a little.
>
> When painting covers or bottom-boards, place always a match or toothpick on each corner, and you will have no trouble with having them to stick together; that is, when you stack them away after painting.
>
> It may also be of interest for those using frames end-spaced by staples, to know that it is much more convenient to put in the staples before nailing up the frames. Just keep the V edge of the end-bars toward you when driving in the staples, and you will have them all right when nailing up the frames. WALD. C. CONRADS.

✣ Contributed ✣ Special Articles

How to Rear Early Drones and Queens

BY G. M. DOOLITTLE.

A CORRESPONDENT wishes me to tell through the columns of the American Bee Journal how he can rear early queens before the drones from his neighbors' hives get to flying. He says that he has hives in the cellar which have drones in sight through the glass that is on one side, and wants to know if those drones will be good in the spring; and, if not, how he will get the early drones.

First, I wish to say that I doubt the wisdom of working for very early queens—that is, trying to rear queens before there are any flowers in bloom, or before the colonies become strong enough to have the hives nearly filled with bees and brood, and by that time his wintered-over drones will be dead. All my experience goes to prove that such queens, reared out of season, are of very poor value, so much so that we would better sacrifice somewhat as regards purity rather than have pure queens of poor quality. But if one is anxious to rear queens just as soon as it can possibly be done and have them reasonably good, then I find the following course the best of any I have been able to find:

Select the queen you wish for your drone-breeder in the fall, and give to her colony the bees from some moderately strong colony during the month of September, having killed the queen in this latter colony a week or so before uniting. See that there is a drone-comb in the center of this united colony, and that they have plenty of honey to carry them over the winter and give them a good start in early spring. As soon as out of winter quarters see that the hive is made as warm as possible, and give them a feed of about a half pint of warmed syrup every night in a feeder. For this purpose a division-board feeder is rather better than any other, for it can be brought right up to the cluster, and the warmed feed poured therein will enable the bees to take the feed no matter if the weather should be quite cool. And if you will take a few bees from some other colony and unite them with this one, by keeping them confined in a box for one or two days, feeding them all they wish for those two days, and then just at night let them run down from the top through a little hole in the covering to the hive, and unite with the drone colony, this will help much toward the early depositing of eggs in drone-cells.

As soon as you have capped drone-brood in this colony it will be time to commence to rear queens. But before beginning on this part I wish to say that you will need to keep up the feeding of the drone colony during every cold or rainy spell of weather, or at all times when the bees can not get a supply of nectar from the fields, otherwise you may find your drones all driven out or killed off some day, for very early drones are often given their "walking ticket" on short notice if any failure in the supply of a daily ration of stores occurs. I suppose this is because the bees know that drones are not needed at this early season of the year.

Being assured that your drone part is a success, select the very strongest colony you may have, and this colony should have its hive as nearly filled with bees and brood as possible. Having such colony look over the frames till you find the queen, when you will set the frame having her on in some box or empty hive while you are fitting in a sheet of queen-excluding metal near the center of the hive, having this sheet fit so close that it is impossible for any bees to get around it in any place; otherwise the queen may get in the side where you are rearing queen-cells and destroy them all.

Having the queen-excluder in place, put that part of the brood which is the youngest on one side and the older brood in the other, and then place the frame set out and having the queen on it in the other side. Now leave them for 24 hours, when you will take one of the frames out from the side having no queen and put it in some other hive for them to care for, if it has brood in it. If only honey it can be set away anywhere after getting the bees off it, which should be done in either case, as we wish all the bees in this queen-rearing hive possible.

Now prepare a stick of cell-cups from your best breeder, as given in "Scientific Queen-Rearing," and place the same in the space left by taking the frame out, when the bees will go on and perfect them just the same as they would in a well-stocked two-story hive later on, according to my experience of later years. But I like the two-story plan the best when colonies become strong enough so that can be used, as it costs less work in rearing queens where *one* colony is used to do this work the whole season through, as is generally my custom.

As soon as the queen-cells are ripe prepare nuclei to receive them; or, if you wish to supersede your old queens with these cells, or with queens from them, kill the old queens from 36 to 48 hours before the cells will be ripe enough to remove from your breeding colony, which will be in 11 days if you have used very small larvæ, or 10 days if larvæ as old as 36 hours were used when the cells were started. It is better to make a colony or two up into nuclei if possible rather than keep all the colonies without a laying queen from 10 to 15 days while the queens from these cells are becoming laying mothers, as the rule is that the queen from the ripe cell will emerge in from 5 to 15 hours after the cell is given the colony, then it will be 7 to 9 days before she mates with the drone, and from 2 to 3 days more before she goes to laying. And during these 12 to 15 days from the time of the killing of the old queen till the queen from the given cell gets to laying, the old one, if not disturbed, would lay eggs enough (the same giving bees which would be on the stage of action in just the right time for the honey harvest) to make all the difference between a good crop of honey and a poor one.

By breaking up 2 or 3 colonies for nuclei the old queens can be allowed to lay right along till the young ones are laying, and then by the Simmins' plan of direct introduction, no time of the rest of the colonies is lost.

Of course you will know that the colony rearing cells will want to be fed liberally at all times that nectar is not coming in from the fields, for upon this "plenty of food" hangs all the difference between good and poor queens.

Onondaga Co., N. Y.

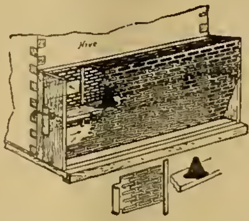
⁂

Improvement in Queen and Drone Traps

BY C. H. DIBBERN.

During the past 12 or 15 years I have experimented a great deal with various queen and drone traps of my own construction, for the purpose of hiving swarms. So well have I succeeded in improving the Alley trap that I feel that bee-keepers generally ought to have the benefit of my invention.

Now in pointing out my improvements, I do not wish to run down any existing traps, as, no doubt, many are succeeding fairly well with them. I have often wondered why more bee-keeping farmers, clerks and ministers who can give only a very small part of their time to the bees, were not using traps to manage swarming. Perhaps the fact that they were patented, and the cost had something to do with it. But, as a matter of fact, they were invented to catch drones, and it was only incidentally found that swarming could also be controlled, that they were used for that purpose.



Some of the improvements I claim for my trap are as follows:

First, it is far better ventilated, and will not cause the bees to fill the trap full of bees and "lay out," unless they would without any trap. This is done by making them larger, using more zinc, and not having the bottom piece come so very close to the hive-entrance.

Second, having the tube-holes in the middle strip within ¼ inch of the front zinc, with the lower side beveled off so as to leave no square edge between the zinc and the tube-holes for the queen to follow, preventing her from getting readily into the trap part.

Third, the upper part of the trap is made entirely of perforated zinc except the ends, thus making it very easy to see the queen when trapped.

Fourth, the sliding door in the rear zinc, enabling one to release the queen without removing the trap from the hive. This is a decided improvement over a "gimlet hole" through one end of the middle strip, for when the swarm is entering the new hive, and you wish to release the queen, she is trying to get through the lower rows of perforations in the rear zinc.

Fifth, the rear zinc extends about an inch below the strip containing the tubes, which is to prevent the bees from "boiling over" when rushing from the hive in swarming; thus obviating the danger of getting the queen in behind the trap.

Sixth, the trap is provided with right and left wire-hooks and small screw-eyes to fasten it firmly to the hive, preventing it from tipping forward if the alighting-board is inclined forward, or working away by wind or bees, as it is liable to do if not fastened.

Sixth, the traps are nicely made, and *painted white;* this makes them look neat, last longer, and enables one to see all parts in the trap.

In a future article I will try to describe how I use the trap in an apiary of 150 colonies, as well as a general system of management. I believe there are many people that would find bee-keeping easy and profitable with this trap.

Convention Proceedings

Report of the Michigan State Convention

BY E. B. TYRRELL, SEC.

(Continued from page 231.)

HOW MANY COLONIES IN ONE PLACE?

"How many colonies can be profitably kept in one locality?"

E. D. Townsend thinks 80 or 90 colonies.

Mr. Kirkpatrick has had 160 in one place, and did not think the locality overstocked. He averaged about the same with 160 as with 60.

O. H. Townsend has 225 in one place, and thinks some years 400 colonies would not overstock a locality. With 225 colonies in one place, he did not find a bee 2 miles from home during clover bloom.

Mr. Kirkpatrick did not find a bee ¾ mile from home during raspberry bloom, and 225 colonies were in one place.

Mr. Root reported keeping 500 colonies in one place, but thought the place overstocked.

Mr. Manley says in his locality there were 585 colonies in a distance of 4 miles, and he did not consider the locality overstocked during a clover flow.

Mr. Bingham says bees gather honey freely only about two hours during a day, hence he does not believe a locality can be overstocked during a good honey-flow.

Mr. Cady says localities vary in that respect.

On motion the Secretary was voted $10 for his services during the past two years.

On motion the Secretary's and Treasurer's offices were united.

The election of officers was then held with the following result: President, W. Z. Hutchinson; Vice-President, Geo. E. Hilton; and Secretary-Treasurer, E. B. Tyrrell, of Davison.

PRODUCING EXTRACTED HONEY.

"In producing extracted honey how much should be sealed before extracting? How do you uncap?"

Mr. Huff extracts after the honey harvest, whether capped or not.

Mr. Kirkpatrick thinks four-fifths should be capped. He is not so particular at the end of the season.

E. D. Townsend extracts 10 days to 2 weeks after the season whether sealed or not, but prefers the sealed. He uses 1¾-inch spacing, and uncaps very deep.

Mr. Manley uses two tubs for an uncapping-can, one tub being cut down half way, then a screen bottom is put on the shallow tub. Now he slips the shallow tub into the deep one, and can uncap one-half day in this tub. He then empties the cappings in a larger tank with screen bottom, and leaves them to drain one week.

O. H. Townsend does not extract clover honey until the beginning of the basswood flow. Then he stores the honey in a warm room for two weeks, and all unsealed honey will then be ripened. Then he extracts.

Mr. Bleach extracts at the end of each honey-flow.

The pamphlet discussion was then taken up, with the result that it was decided to get out a much larger edition and try to send one to each grocer in Michigan; also to advertise in a good grocery paper. Some copies will be sent to each member and one to each honey-dealer. It was also decided to insert the names of all members whether they had honey for sale or not. An edition of 5000 was advocated.

CANNING NEW EXTRACTED HONEY.

"Do you think that extracted honey should be canned up air-tight before the natural heat is out?"

O. H. Townsend had no experience in that, but should prefer to let it stand before canning.

Mr. Beecham stores in tanks, then draws clear honey from the bottom.

EXCHANGING SUPERS.

"Is there any advantage in changing supers from one hive to another to secure more rapid storing and completion of sections?"

Pres. Hutchinson thinks there is in some cases.

Leonard Griggs says it pays any bee-keeper to manage all possible ways to get bees to enter supers. He changes supers, also uses bait-sections.

Mr. Aspinwall doesn't want to go to that trouble. He said his hives don't need it.

Pres. Hutchinson advocates moving bees and all when changing supers.

Mr. Beecham places one section of drawn comb in each corner of the super.

Mr. Aspinwall thinks it better to put drawn comb in the center.

Mr. Manley puts the drawn comb in the center for bait-sections, but to get unfinished sections filled he would put them at the outside during the flow. He advocates running for extracted honey at both ends of the flow, so as to get the bees started in supers quicker, and also to have no unfinished sections.

Mr. York then being ready to announce his decision of the winners of prizes, they were given as follows:

Best 10 pounds of extracted honey—1st, W. E. Forbes; 2d, W. D. Soper; 3d, C. A. Huff.

Best 10 pounds of comb honey—1st, Oscar Smith; 2d, J. W. Flieman.

Best 10 pounds of comb honey produced in Danzenbaker hive—1st, W. E. Forbes.

CLEANING SECTIONS—PROPOLIS.

"Who has tried sandpaper rolls for cleaning propolis?"

Mr. Aspinwall says it is not satisfactory as it fills up too much.

"Is there any use to which I can put the propolis scraped from the hives?"

Mr. Aspinwall said it has the best flux for soldering lead pipes one can get.

O. H. Townsend said, to separate propolis from the wax, put all in water and the propolis will sink while the wax floats.

HIVE BOTTOM-BOARDS.

Mr. Soper asked for a talk on bottom-boards, and the following discussion was brought out:

Mr. Beecham prefers a removable reversible bottom with ⅞-inch entrance.

Mr. Soper asked if the members practice reversing the bottom-boards.

Mr. Beecham thinks reversible bottoms preferable.

Mr. Woodman prefers bottoms with ⅞-inch entrance.

Mr. Griggs prefers ⅞-inch for summer and winter, and ⅜-inch for spring and fail. He likes a hinged bottom-board.

Mr. Soper believes bees do as well with a small hive-entrance. He has had good results with an entrance ⅜x3 inches.

Mr. Griggs says his bees did well with small entrance until warmer weather.

Mr. Manley wants a cheap bottom-board, and reported a colony in a 12-frame hive with an entrance ¼x4 inches giving 130 pounds of extracted honey, and the bees did not hang out. He believes in plenty of surplus-room.

Mr. Beecham believes bees can be given too much surplus-room. He thinks no colony needs more than three half-stories at one time for extracted honey.

Mr. Cady reports favorably on bottom-boards and covers made of cement.

On motion the ladies were extended a cordial invitation to attend and become members of the Association and to compete for any prizes offered.

The question was asked if we could dispense with glass in shipping-cases, but the majority thought not.

SIZE AND SHAPE OF SECTIONS.

"What is the best size and shape for sections?"

Messrs. Aspinwall and Beecham use 4¼-inch square, plain.

Mr. Aspinwall thinks that narrow sections take too much foundation, and are too thin and light to handle; also too many sections for the amount of honey. He wants as little foundation used as possible, and predicts that in 10 years more there will be more square than tall sections in use.

Mr. Forbes has used 4¼x4¼ sections for 20 years, but prefers the tall to the square ones. He uses full sheets of foundation with bottom starters.

Mr. Manley found the honey not as well attached in tall as in square sections.

Mr. Kirkpatrick prefers the tall sections, and uses full sheets of foundation.

PUTTING ON EXTRA SUPERS.

"Should the empty super be put under or on top of the full one?"

Mr. Manley puts the second super on top, and believes it the better way.

Mr. Short puts the second super on top.

Mr. Aspinwall tried putting the second super on top with poor results. He said the percentage of swarming will be greater when the super is put on top.

Mr. Hilton advises putting the empty super under the full ones.

CLOSED-END FRAMES.

"Is there any advantage in closed-end frames over open-end ones?"

Mr. Aspinwall thinks there is, and Mr. Bingham said there is a great advantage. He then gave a clear description of his hive, which he claims has the original closed-end frames, and said he uses closed-end frames exclusively. He advocated a frame 1½ inches wide, and shorter than the regular Langstroth to prevent sagging. He also explained the uses of his smoker and honey-knife.

MOVING BEES—FREIGHT RATES ON HONEY.

"When is the best time to move bees?"

E. D. Townsend said during apple-bloom.

Mr. Forbes brought up an objection to the handle on the 60-pound cans, saying it often pulled off. He also spoke on the freight rates on extracted honey being higher than on syrup.

A motion was carried that Mr. Hilton be asked to see what can be done to secure a better classification on honey.

A few more questions were discussed, but the Secretary being busy with newspaper reporters, did not get them recorded.

The convention adjourned to meet at the call of the Executive Committee. E. B. TYRRELL, *Sec.*

Our ✣ Sister Bee-Keepers

Conducted by EMMA M. WILSON, Marengo, Ill.

Loss of Bees—Queenless Colony

DEAR MISS WILSON:—1. I visited my apiary of 35 colonies to-day, and found 3 colonies dead and several more in a hopeless condition. Do you think the intensely cold weather which we have had for the past 6 weeks, could be the sole cause of the loss?

2. It was not from lack of stores, for one of the hives (I don't use any but the 8-frame Langstroth) had all the frames full of sealed honey and pollen, with the exception

of the 2 they had clustered between where the honey was partly consumed.

Was it a queenless colony? When I scraped up all the dead bees in it there was not enough to fill a pint cup. I found several queen-cells started. There was no disease, for everything smelled as sweet as new, and it had less bees in it with all that honey than either of the other 2, and all 3 hives were perfectly dry. I took special care in packing them for winter the latter part of September.

I had been in very poor health during the summer, so did not take the pains to examine them to see if each colony had its queen, feeling satisfied that they did, as they seemed to be doing all right. The bees have always been wintered on the summer stands, and with very little loss.

There was no sign of moths. I am puzzled to know why all that honey is in that hive. I could scarcely lift it, and instead of clustering in the center of the frames under the Hill's device, they clustered between 2 of the outside frames. MRS. MARY A. RAY.

Adams Co., Ohio, Feb. 22.

1. Not necessarily; and yet it might be; not so much the intense cold as the long continued cold.

2. Almost certainly that one colony was queenless. The starting of queen-cells is one evidence, provided there was anything in them. The mere presence of cups started with nothing in them is no indication of queenlessness, for these may be found in any hive. The case was probably something like this: It was a strong colony, and by some means became queenless some time before the close of the honey harvest. Other colonies were busy storing in supers, while this one was doing a large part of its storing in the brood-chamber, filling up the brood-combs with honey as fast as the young bees emerged from them. In this way you will see that a strong queenless colony is the very one that should be heaviest in stores; for other colonies could not fill the brood-combs so long as brood was in them, and this one had no brood to prevent the honey going into the brood-chamber.

Bees Gathering Pollen—Wintered Well

Our bees were taken out of the cellar March 27, and were bringing in pollen shortly after being put out. They seem to have wintered well, having been in the cellar four months. To-day it was too windy for them to fly at all. Soft maple is in full bloom.

(MISS) MARY THEILMANN.

Wabasha Co., Minn., March 29.

Moving Bees a Short Distance

I have about 100 colonies which are on a couple of village lots, and which I wish to move outside the corporation (a distance of about five or six blocks) in April or May. How can I move them at that time of the year so the bees will stay in their new location?

My bees have wintered very nicely, and most of the colonies appear quite strong, but I suppose there will be some loss. I notice the mice have been very bad in some hives.

I trust you have been very fortunate in wintering yours, and wish you "good luck." MATHILDE CANDLER.

Grant Co., Wis., March 1.

In April or May the bees will already have made many flights, and without special precaution, when moved so short a distance, a large number will return to the old stand. If you will move them two or three miles away, and then return them to the new place after two or three weeks, they will be likely to stay put. That's very troublesome, and you would probably rather lose more bees and have less trouble. Shut them up in their hives for two or three weeks, and move them to the new place before liberating them. But some of them would smother, and many bees worry themselves to death. Well, you can compromise. Shut them in their hives in the evening, or any time when all are in the hives. If the weather should be cool enough not to fear smothering, they might remain thus imprisoned two or more days. More likely it will be so warm that you will feel you must move them the next forenoon. No need to be so very careful in moving them gently; fully as well to knock them about a bit. As fast as you move them away clean up the old ground, and don't leave any stands or empty hives standing about. The object is to have the old ground look as little like home as possible, so that if any bees should return they will not feel like staying.

After all are moved you are ready to open entrances. Go to a hive and smoke and pound upon it till the bees are thoroughly frightened and roaring loud and strong. Less pounding will do if they are already roaring before you touch the hive. When you think they are sufficiently excited open the entrance, setting before it a board so as to prevent the bees from shooting out in a straight line. After all are opened see if you find many bees at the old place that act as if they had a notion of staying there. If you do, it may be well to set for them a hive filled with empty combs. Then when flight has ceased in the evening, distribute these bees in the new apiary where you think they will do the most good, perhaps shaking them down in front of entrances. If they come back next day repeat the process.

Mr. Hasty's Afterthoughts

OUR TOIL DOTH SWEETEN OTHERS

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

SHORT HONEY-DEARTH A BLESSING.

Mr. Morley Pettit may be right that a short period of severe dearth in the midst of the season is often a blessing, in that the drones are killed off and swarm-fever stops. How nice it would be to have bees on a barge and tow them to barren regions for a few days, and then tow them back.

Imaginable that two smokers running in a room that is not altogether bee-tight might help *some* in keeping bees out—but, murder*ation!* What sort of beings inhabit Mr. P.'s locality, that they can consent to work in a choking, glimmering gloom so suggestive of bad regions? Page 119.

GRANULATED HONEY—AN "END-STINGER."

To teach customers that the natural condition of honey is granulated—I'm afeared that would be stretching the truth a little. With the honey in the comb, and the comb in the hive, and the hive in the best of condition, granulation is the exceptional and not the usual state. Also it is a state which the bees themselves manifestly don't like, in that they very generally throw the granules away.

For a stinger at the last end, that "make good use of your money when you get it," is just the thing, Mr. Pettit. The dull and ordinary essayist would surely have left that off as not strictly bee-ological. There is such a thing as sticking *too close* to the text when the pews sadly need some "general applications." Page 119.

WAX AND RELIQUEFIED HONEY.

I should want Mr. Armstrong to wipe his specs and examine his facts once more. Don't believe there is any wax in the foam that rises out of the interior of granulated honey when it is reliquefied. Wax all rises while the honey is at rest previous to granulation. However, propolis usually contains a small percent of wax. It is imaginable that a can of honey might have some propolis settled to the bottom that would yield a trifle of wax when subjected to heat. Propolis sinks in water—can't say that I ever saw it sink in ripe honey. Page 119.

WORKING UP A HONEY MARKET.

It's a wise suspicion of Dr. Emmons that his excellent home market for honey came largely as the result of *not trying* to make a market—giving away all his surplus at first, and getting to sell only as his crops increased, and even then with a sort of reluctance. *Convinced the flies that he was not a spider.* Underneath the diligent cultivation of the market (which the papers so properly tell us about) the flies oft imagine that they hear the traditional, "Will you walk into my parlor?" And they whisper to themselves, "That spider will not catch me." Page 125.

FEEDING AN OBSERVATION COLONY.

Allen Latham's suggestions about feeding bees in an observation hive are good; but I think we need something decidedly better—some sort of feeding-chamber right adjacent to the back end of the frame, where robbing-bees could not get it short of first fighting the colony. It would increase the cost of the hive a trifle; but it could be made more convenient than setting a saucer and tumbler on the window-sill. Page 126.

"BATHOS" INSTEAD OF "PATHOS."

In my second paragraph on page 136, read bathos in place of "pathos."

SOLIDIFYING OF LIQUID SUGAR AND HONEY.

As to the conundrum on page 131, about the solidifying of liquid sugar and liquid honey, I should say the former is sharp and hard, with some exceptions, while the latter is soft and cloud-like, with some exceptions. Not very satisfying from the logician's point of view; but when the facts are that way what else can you say about it? The candy maker goes to the length of his art to make sugar soft. The bee-student, experimentally inclined, tries zealously to show a sample of honey sharp, hard, and dry like sugar.

PROPOLIS SCRAPING AND WIDE FRAMES.

Mr. Doolittle evidently has a location not so bad for propolis as some of us have. I, too, still use wide frames and tin separators, but there's quite a bit of scraping to do notwithstanding. But say, comrade, even granting that scraping propolis is not an ideal, Garden-of-Eden pastime, between that and *fishing*—I'd scrape. Page 134.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. MILLER, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Depth of Langstroth Hive

On page 184, you say the depth of a Langstroth frame is 10⅛ inches. Ours are 9⅛. I use what I suppose is the standard Langstroth frame 9⅛ inches deep, so I do not know where you would put the extra one inch in depth of hive. Please enlighten us.

TEXAS.

ANSWER.—Of course the depth should be 9⅛. Now what punishment do you think severe enough for a printer that would make such a mistake as that? The trouble, however, is that I'm pretty sure the printer is entirely innocent and I'm the culprit. I don't understand how I could have written it 10⅛, unless it be a case of total depravity. Please accept my hearty thanks for the correction.

◆

Bees and Hens in the Same Yard—Moving Bees

1. How would it do to place about 50 hens and 30 colonies of bees in a yard 150 feet square.

2. Would many bees be lost by striking the fence-wires on windy days?

3. Could bees that are packed with a burlap cushion of shavings be safely moved a distance of 4 miles by closing the hive-entrance? Would they get air enough through the cushion? NEW YORK.

ANSWERS.—1. It would probably do all right.

2. If the wires were a foot or so apart so that the bees would be in the habit of flying between them, a very few might be killed; but if the wires were much closer together the bees would always fly over and none would be killed.

3. Don't risk it. Close the entrances with wire cloth.

◆

Getting Swarms to Enter Empty Hives

There are swarms issuing from the yards of bee-keepers all around me, which they do not take any pains to hive, as they have all they care for. I have seen swarms hanging on the limbs of trees for a day or two, and have set hives out to catch them, but get very few.

Have you any suggestions how to draw them to a hive set out in the woods? This means a great deal to me. MICHIGAN.

ANSWER.—I don't know anything more that to place a hive where it is easily found by a swarm looking for a home, the inside of the hive being acceptable in every way. Probably nothing, in this latter respect, will be better than to have the hive filled, or partly filled, with clean, empty combs.

◆

Colonies Affected with Diarrhea

Last fall I had 50 colonies of black and hybrid bees on the summer stands with no protection except what a thicket on the west and north afforded. During the very cold weather of January and February the snow kindly enveloped them, and when the mild days of March came, and I could examine their home, I found one colony dead, under circumstances which, coupled with subsequent events, led me to believe some disease had appeared among them. It is this belief that prompts me to refer the circumstances and conditions to you for your opinion.

Last summer this hive was glued and waxed with a black, tarry paste-like propolis that did not smell just right, but in every other way the bees seemed healthy and all right. They did not work in the super as freely as some others, but went into winter with ample stores. I did not, at the time, notice any other colony thus affected, but upon continuing my search, in March, I found another dead colony which showed this same dark propolis. In about a week another, similarly conditioned, "played out," and the next day I discovered the whole yard engaged in robbing a fourth. I covered this up with carpets and straw to stop the robbing, and upon examination later I found it affected the same as one, two and three. On March 15, I found a fifth one dead with these appearances existing.

In no hive did I find any brood except in the fifth. There the brood seemed perfectly healthy, and just ready to emerge from the cell. Not all that showed black propolis died, but all that died were of this class. The offensive odor, noticeable during the hot weather last summer, was not discernible this spring, but there were patches of pollen that seemed to have soured, and the cells containing it were broken down and presented a very unhealthy appearance. All these colonies left plenty of stores, and the cells in the brood-nest were in such good condition, and so clean, as to give no evidence of any "brood disease."

I have tried to be brief in this history of perhaps an imaginary trouble. Although it may not seem to you very brief, I should like to know if you or any reader can tell me if it is a disease, and what I can do in the premises to arrest or eradicate it. MISSOURI.

ANSWER.—I've read your letter through twice with much care, and am a little puzzled as to reply. The appearance of your letter gives me the impression of a man of intelligence, but I suspect that you have not had many years' experience with bees, and if you will promise to take it good-naturedly I'll assume that to be the case, and answer accordingly. The "black, tarry, paste-like propolis that did not smell just right" was not propolis at all, but the excrement of the bees resulting from diarrhea. To be sure, you mention it as being first noticed last summer, and diarrhea does not usually occur in summer, but that may have been from the previous winter. This winter and spring a number of colonies were affected with diarrhea, smearing the combs and particularly the top-bars of the frames, and probably spotting the fronts of the hives, the worst cases dying from the disease. The fifth case was the only one with brood merely because it was later in the season, when brood-rearing had begun. The remedy for diarrhea is a cleansing flight. Wholesome food and proper protection and ventilation are preventives. Consult your book on the subject of diarrhea.

◆

Drone-Brood and Worker-Brood

How can I tell drone-brood from worker-brood? WISCONSIN.

ANSWER.—Lay a rule over the comb containing the brood; if it measures 4 cells to the inch, you may know it's drone-brood; if 5 to the inch, it's worker-brood. If the brood is sealed, the sealing of the worker-brood is flat, and that of the drone-brood raised or rounding. If you have a drone-laying queen, or laying workers, you will have drone-brood in worker-cells, and the sealing will be rounding like so many little marbles.

◆

Honey Sent to Commission-Men

About a year and a half ago I shipped two barrels of honey to a honey commission firm at their request, they having informed me that they had a buyer for same. I paid 6 cents per pound here for 1080 pounds net. The firm said they could make a good profit for me on it at that price. Well, time rolled on, as it has a habit of doing, and I received no returns from the honey.

About 6 months ago the firm wrote me saying that they would put the honey in cans, as they could not sell it in barrels. Later they wrote that it was all sold but 3 or 4 cases. Then I wrote them not to sell at a loss, and to send me the money for that already sold. They replied with a draft in full for $35 49, 969 pounds at 4½ cents, less freight and commission. No account of cans, or labor of transferring, and 111 pounds short. I could have sold it in Chicago at 6 cents, and would have been glad to pay the freight charges, if only I had been informed. I do not know what right they had to sacrifice my property for the little $3.60 commission they charged for selling, after I had told them not to sell at a loss.

What I wish to know is, Has a shipper any rights in his property after it goes into the hands of a commission-man? IOWA.

ANSWER.—I'm not familiar with the laws of the different States, but I feel safe in saying that when honey is sent to be sold on commission it remains your property till it is sold to a customer, and is at no time the property of the commission-man. If you say he must not sell below a certain price, he has no right to do so, and in general you have the right to instruct him what he is to do, he, of course, receiving the proper remuneration for his services.

◆

Various Races in One Yard—Best Workers—Honey in Sunflowers

1. Last Saturday was a very warm day, and I noticed the bees bringing in a white-looking stuff on their legs. What could it have been?

2. One of my neighbors told me that black or brown bees could not be kept in the same yard with Italians. Is that correct?

3. What kind of bees do you consider the best workers?

4. Is there any honey in sunflowers, and, if so, could the common black bees get it? IOWA.

ANSWERS.—1. Probably early pollen; possibly sawdust.

2. All the kinds of bees in the world might be kept in one yard. Possibly he meant you could not keep two kinds in one yard without their mixing, which is true; but it is also true that they mix when two miles or more apart.

3 Very likely you will get nothing better than Italians, although for some purposes or localities some other may be better.

4. Yes to both questions.

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Reports and Experiences

Temperature of Bee-Cellars

I have 82 colonies to begin the season with. It has been a very severe winter, and the temperature in my bee-cellar has been only 39 degrees all winter, while that of a neighbor's has been 45. We will note the difference in spring. Mine had 5 pounds more of honey each than his did, when put into winter quarters.

I am very much pleased with the American Bee Journal. It grows better every year.

F. A. METCALFE.
Ontario, Canada, March 7.

The Season in California

I have remarked several times upon the flattering prospects in California for the coming honey crop. In the 11 years that I have been here, although we have had 3 remarkably fruitful years, I think no season has given this early anything like the genuine promise that confronts us at this time. We have had most generous rains, in fact the best for over a decade. As I have stated frequently, 15 inches is our average. We have already gone much

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beyond this, and the chances are that the end is not yet.

Yesterday I took a ride into the canyons and there was a wealth of bloom that was surely most encouraging. I chanced to stop my horse beneath a live-oak tree, which was in full bloom, and the loud hum of the bees showed full well that they were making good use of their opportunity. This winter has not only been very wet, but it has been so mild that we are sure to have very early bloom. I have often called attention to the fact that in wet years our bloom is sure to be protracted, so the present year we are not only sure to have a great wealth of nectar-bearing flowers, but it is equally certain that they will hang on for a long time.

There is only one possible chance for a failure. If, at the time of the honey season we should have continuous cold winds, these might somewhat interfere with our success. It is hardly to be expected, however, that we

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can have continuous weather of this kind. An occasional day, or a few days, may come and lessen the crop, but that the entire season should be thus characterized is not to be presumed.
A. J. COOK.
Los Angeles Co., Calif., March 23.

Locations in Virginia and Maryland

Last fall I sold my bees and fixtures with the intention of locating in the South, hoping to do better where the summers are longer and winters less severe.

Would some bee-keeper in Virginia or Maryland let me know through the columns of the American Bee Journal if it is a good place for bees in those States, when the honey-flow comes in, and what the bees mostly work on? also, if there is any chance for Northern bee-keepers to locate in those States to start an apiary. An answer would be of great interest to many here.
JOHN H. OREN.
Barron Co., Wis., Feb. 6.

Loss of Bees by Smelter Smoke and Drouth—Great Yield from One Colony

The few colonies I have left from the wreck of 7 years' smelter smoke and 3 years' drouth have never done so well as they did in 1904. From the causes named, during the last 7 years, I have lost about 400 colonies of bees. In 1900 I had 97 colonies in one apiary, and in the spring of 1903 only 2 of them were left. These I increased to 4, and as there was a good honey-flow I piled supers filled with empty combs on top until 2 of them were 3 stories and 2 of them 4 stories high. I wintered them in that way, and they came through in good condition. There was a good honey-flow last season, and as the bees were located pretty much outside the range of the smelter smoke, they gave a good account of themselves, and I now have 14 colonies.

One of the colonies in the 4-story hives referred to came through the winter strong, and on May 10 it had 3 extracting-supers nearly full of brood, and a super of honey. I removed the queen with 2 supers of brood,

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left a super of hatching brood on the old stand, dividing the super of honey between them, and finished filling each super with foundation. May 21 both hives were full of bees and honey, the new one having built over 30 queen-cells. I then divided the bees, brood and honey of the new colony, and filled up with foundation, as before, again moving the old queen to furnish field-bees for the second new one. June 16 the old queen came out with a swarm. July 1 and 11 I made 2 more swarms, and as there was a big honey-flow they were all strong. I moved the old colony on July 1, but on July 11 I found it could not stand a second move. As there were 4 comb-honey supers on the May 10th swarm, I moved the May 21st swarm to furnish field-bees for the last new one. I now had 6 strong colonies, and run them to the best advantage with the following result:

I took off 617 pounds of extracted honey, which I sold at an average price of 7½ cents per pound, and 16 24-pound cases of comb honey which I sold at $2.50 per case. I also left an extra super for wintering on each of the 6 colonies.

The honey score of the 6 colonies is as follows:

Extracted,	June 20	60 pounds
"	July 1	117 "
"	July 11	50 "
"	July 29	150 "
"	Aug. 15	165 "
"	Aug. 29	75 "
Comb,	Aug. 15	2 cases
"	Aug. 29	3 "
"	Sept. 15	4 "
"	Oct. 14	7 "

I am wintering them in 2-story hives, and I think there is honey enough in either story to carry them through. The bees seem to winter better in this way, with less spring dwindling, and they build up faster in the spring.

In taking off the honey I boxed up the full combs and hauled them home, and after extracting the honey from them I melted the

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combs, getting about 30 pounds of wax. I put sheets of foundation between the partly-filled combs, and kept all queens supplied with full sheets of foundation for laying-room. I regard that particular colony as a wonder.

Our leather-colored bees are on top as honey-gatherers. I have not figured up the profit on those bees, but if the 6 colonies are alive the first of April I would not take $50 for them.

With my 97 colonies in 1900 I thought I had things pat, but, like Paddy's flea, when he put his finger on it it was not there, and my bees vanished like the smoke that helped to destroy them. It now looks as if the beginning of the end of smelter smoke is in sight, but I will report later if the good news proves true.

Mr. Hasty said last spring that I had thrown up my hat for the 1000-pound mark, and he thought if some one would give figures instead of assertions it would be better. Now this figure has been reached in this State many times, but it must not be inferred that 1000 pounds of honey has been taken from one hive. It is always figured "spring count"—one colony and its increase during the season.
E. S. Lovesy.

Salt Lake Co., Utah, Feb. 3.

Bee-Supplies!
Discount for Early Orders
We carry a large stock and greatest variety of everything needed in the Apiary, assuring BEST goods at the LOWEST prices, and prompt shipments. We want every bee-keeper to have our FREE ILLUSTRATED CATALOG, and read description of Alternating Hives, Massie Hives, etc. WRITE AT ONCE FOR CATALOG
AGENCIES.—Trester Supply Co., Lincoln, Neb.; Shugart & Ouren, Council Bluffs, Iowa; Fulton & Ford, Garden City, Kan.; I. H. Myers, Lamar, Colo.; Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex. KRETCHMER MFG. CO., Red Oak, Iowa.

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LEWIS' GOODS IN KENTON, OHIO
We handle a most complete line of G. B. Lewis Co's goods at their regular factory prices. Dovetailed HIVES, SECTIONS (all kinds), SMOKERS, VEILS—in fact everything for the bee-keeper. Send 10 cents for B-PRANKS, an amusing and instructive little pamphlet, or, it will be sent free for the names and addresses of 6 bee keepers.
Lewis Makes the Finest Supplies—We Sell Them.
Wholesale and Retail. Send for Catalog.
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HONEY-JARS.
For a limited time we offer No.25 Honey-Jars, porcelain cover, metal screw cap, holding one pound of honey net, one gross in case complete, in 5-gross lots, $4.00 per gross; less quantities, $4.50 per gross, f.o.b. New York. If you want to secure some, let us know at once.
HILDRETH & SEGELKEN,
265 & 267 GREENWICH ST., NEW YORK, N. Y.
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In mortality to those insured in the
TOTAL ABSTINENCE DEPARTMENT
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Security Mutual Life Insurance Company
EACH POLICY HOLDER is entitled to a Bond issued by the National Total Abstinence League.
YOU may hold a policy and BOND.
General and special agents wanted. Address,
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March 1st to April 15th
2 percent Discount.
Dovetailed Hives from Michigan White Pine, $1.25 each, 1½-story for comb honey. Address,
The Wood Bee-Hive and Box Co.
10Atf LANSING, MICH.
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are afforded via the Nickel Plate Road. With solid through trains to New York City and intermediate points, via both Lackawanna and West Shore Roads, and to Boston and other New England points, via the Nickel Plate and West Shore and Boston & Maine Roads, travelers via that popular low rate line are offered all modern conveniences. Excellent Dining Car Service, meals being served in Nickel Plate dining cars on American Club Meal Plan, ranging in price from 35c to $1.00. No excess fare charged on any train on the Nickel Plate Road. Chicago depot, Van Buren and La Salle Sts., the only railroad station in Chicago on the Elevated Railroad Loop. City Ticket Office, 111 Adams St. 'Phone Central 2057.
1—11A5t

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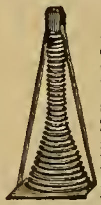

Queen-Clipping Device Free!
The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. It is used by many bee-keepers. Full printed directions sent with each one. We mail it for 25 cents; or will send it FREE as a premium for sending us One New subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,
GEORGE W. YORK & CO.,
CHICAGO, ILL.

One-Piece Sections
"Columbia Brand"
Strictly High-Grade in Timber, Quality and Manufacture.
Prices on application.
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The best of everything for the poultry and bee-keeper.
Freight Rates from TOLEDO are the Lowest
BIG DISCOUNTS FOR EARLY ORDERS.
Our 60-page Illustrated Catalog is out. Send for one. IT'S FREE.
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For Queens SEND TO JOHN W. PHARR Berclair, Tex.
He will furnish at same prices as last year: Tested, $1; Untested, 75c; 5 for $3.25; 10 for $6; 15 for $8.25; 25 for $12.50; 100 for $45. He breeds Goldens, Carniolans and 3-Band Italians. Also 1, 2, and 3 frame Nuclei, and full colonies. Prices given on application. Pharr pays the freight, and guarantees satisfaction on all Queens. To do justice and judgment is more acceptable with the Lord than sacrifice. —(Prov. 3: 21.) 6Atf
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FOR SALE
The apiary of the late Charles B. Achard, is for sale in Rochelle, Du Page Co., Ill. It contains 11 colonies, 30 complete Danzenbaker hives (15 of them unused), tools, sections, foundation, etc. Inquire of
MISS A. M. ACHARD, Rochelle, Ill.
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Guaranteed Superiority!

Lowest Prices

We have been making Bee-Hives, Sections, etc., for over 20 years.

New.. Illustrated.. Catalog free; also sample copy of

The American Bee-Keeper

(Monthly, 50 cts. a Year.)

The best magazine for beginners. (It has been published by us regularly for 15 years.)

Address,

THE W. T. FALCONER
MFG. CO.,
JAMESTOWN, N. Y.

With tears of sweetest joy,
That nothing can alloy,
I arise to say that
(Excuse this shabby hat)

DOOLITTLE

Has worked so very hard
That he has got a "pard"
To help him with his bees,
And if you wish to please

yourself and us, send for a circular giving particulars regarding our fine ITALIAN QUEENS.

Prices for Queens this season will be as follows:

	1	3
Untested	$1.00	$2.25
Tested	1.25	3.00
Select Tested	1.50	4 00
Select Tested (1904 rearing)	2.50	....
Select Breeding	5.00	....
Extra Select Breeding	10.00	....

Prices quoted by the dozen or hundred.

Doolittle & Clark,
11Dtf Borodino, Onondaga Co., N. Y.

E. E. LAWRENCE, DONIPHAN, MO.
(box 28), breeder of
Fine Italian Queen Bees
Orders booked now and filled in rotation. Send for price-list.

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When consigning, buying or selling, consult
R. A. BURNETT & CO.,
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The Dixie Home

MAGAZINE, largest, brightest and finest Illustrated Magazine in the world for 10c a year, to introduce it ONLY.

It is bright and up-to-date. Tells all about Southern Home Life. It is full of fine engravings of grand scenery, buildings and famous people. Send at once. 10c a year, postpaid, anywhere in the U.S., Canada and Mexico. Six years, 50c. Or, clubs of 6 names, 50c; 12 for $1. Send us a club. Money back if not delighted. Stamps taken. Cut this out. Send to-day. THE DIXIE HOME,
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Headquarters for Bee-Supplies

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At Root's Factory Prices

COMPLETE STOCK FOR 1905 NOW ON HAND.
FREIGHT RATES FROM CINCINNATI ARE THE LOWEST,
ESPECIALLY FOR THE SOUTH,
AS ALL FREIGHT
NOW GOES THROUGH CINCINNATI.

Prompt Service is what I practice.
Satisfaction guaranteed.
You will save money buying from me. Catalog mailed Free.
Send for same.
Discounts allowed on early orders. Take advantage by ordering now.

Book orders for GOLDEN ITALIANS, RED CLOVERS and CARNIOLAN QUEENS.

☞ For prices refer to my Catalog.

C. H. W. WEBER CINCINNATI ...OHIO...
Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

Honey and Beeswax

Chicago, April 7.—The market has cleaned up quite well on comb honey. Choice white comb is selling at 12@13c, and the off grades are also moving freely at 9@10c. Extracted is not sharing in this movement and prices are weak at 6@7c for white and 5@6c for dark according to flavor, body and package. Beeswax, 29@30c.
R. A. Burnett & Co.

New York, March 11.—There is no improvement in the comb honey situation. The demand is next to nothing; quotations nominal and no doubt some of the stock will have to be carried over. We quote fancy at 13c; No. 1 at from 11@12c, and dark at from 9@10c. Extracted is in fair demand: White at from 6@6½c; light amber at 5½c; Southern in barrels from 50@57c per gallon, according to quality. Beeswax firm at 29c.
Hildreth & Segelken.

Boston, March 9.—The demand for comb honey still continues light with heavy stocks on hand Fancy white, 15@16c; No. 1, 14c. Extracted, 6@8c, according to quality.
Blake, Scott & Lee.

Kansas City, March 31.—The honey situation does not improve. While there is a little better movement the prices seem to be lower. Fancy white brings $2 a case; No. 1, $1.75; amber and lower grades from $1.25 to $1.50. Extracted, 4½@6c. Beeswax, 28c.
C. C. Clemons & Co.

Cincinnati, O., April 7.—The large stock of comb honey, yet offered with hardly any demand caused lower prices. I quote fancy water white at 12c; other grades in proportion, lower. Extracted is in the usual demand for this time of the year; quote amber in barrels at 5¼@5¼c; in cans, ½c more; white clover, from 7@8c. Beeswax, 28c.
C. H. W. Weber.

Philadelphia, March 22.—As the season advances, the call for honey is decreasing, and the market at the present time is dull. Some few sales. We quote: Fancy white, 13@14c; No. 1, 11@12c; amber, 11c. Extracted, white, 6½@7c; amber, 5½@6c. Beeswax, 28c.

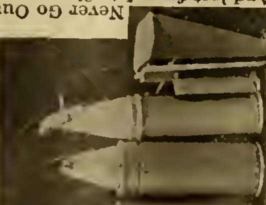
We are producers of honey and do not handle on commission.
Wm. A. Selser.

Albany, N.Y., Feb. 8.—Honey market dull this extreme cold weather, especially comb, which candies or granulates and cracks easily. We quote: Fancy white, 13@14c; No. 1, 12@13c; mixed, 10@11c; buckwheat, 10@11c. Extracted, better demand: Buckwheat, 6@6½c; white, 6@6½c. Buckwheat most in demand, as the Jewish people will have no other. Beeswax, 30@32c.
H. R. Wright.

Cincinnati, March 10—There is little, if any, improvement in the honey market here, since our last quotation. We hope to render a more encouraging report soon. We quote amber extracted honey in barrels and cans at 5⅝@6½c. White clover at 7@8c. Fancy white comb at 12@13c. Beeswax, 28c.
The Fred W. Muth Co.

San Francisco, March 29.—White comb, 1-lb. sections, 11@12 cents; amber, 8@10c. Extracted, white, 6@6½ cents; light amber, 4½@5½c; amber, 3¾@4¼c; dark amber, 3@3½c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

Stocks of amber grades are of fairly liberal proportions for this advanced date in the season, and include some recent arrivals from the Hawaiian Islands. Inquiry is slow and market lacks firmness. Choice water-white honey is in light supply.



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4 Largest Sizes Soot Burning

Never Go Out

And last from 5 to 21 years

Pat'd 1878, '82, '92 & 1903

Tin 4-in. Smoke Engine 3½-inch 3-inch 2½-inch 2-inch Wonder
$1.50. $1.10. $1.00. 90c. 65c.—per mail.

Sent on receipt of price per mail.

T. F. BINGHAM, Farwell, Mich.

Otisville, Pa., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine.
Fred Fodner.

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If your bees could talk they would ask you for

LEWIS' GOODS

The Aristocracy of "Beedom" Live in Lewis' Hives.

NOTICE.

Lewis' Goods are the BEST that your money will buy. It is economy in the end to use them. They cost you no more than any other standard make. If you have any difficulty in making up your order, determining correct prices, send us a list of the articles wanted and we will make you an estimate showing the exact cost. We have increased our output by installing new machinery, our storage capacity with new warehouses, and are therefore in position to give the best service in the world.

Agents Everywhere

CORNER OF
BEE HIVE DEPT.

Agents Everywhere

SECOND EDITION.

We have received many gratifying compliments on the uniqueness of "Bee Pranks," coupled with an insistent demand for more. Our first edition is exhausted, and we have been compelled to issue a second edition. We will send this little book postpaid for 12 cents, or free for the names and addresses of 5 bee-keepers.

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RECORDS ON
PROMPT SHIPMENTS

BEWARE
WHERE YOU BUY YOUR
BEEWARE
WATERTOWN LEWIS U.S.A.
MAKES THE FINEST

SEND FOR FREE
CATALOG
describing and listing
EVERYTHING
KNOWN TO THE
BEE-KEEPER

G. B. LEWIS CO. Manufacturers of Bee-Supplies **Watertown, Wis.**

American Bee Journal

OUR TOIL DOTH SWEETEN OTHERS

WEEKLY—$1.00 A YEAR.
Published by GEORGE W. YORK & CO., 334 Dearborn Street.

45th Year. CHICAGO, ILL., APRIL 20, 1905. No. 16.

WEEKLY

ACHUSE AGRICULTURAL COLLEGE.

GEO. W. BRODBECK
(See page 292.)

Every Bee-Keeper

Or Prospective Bee-Keeper

should read GLEANINGS IN BEE CULTURE. It gives you the latest in the apicultural world. If you have honey and wax for sale it tells you the market prices. If you have troublesome questions to solve, it helps you. The very best bee-keepers write for it. The following noted writers contribute regularly:

C. C. MILLER,
Of Illinois.
G. M. DOOLITTLE,
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Of Colorado.
LOUIS SCHOLL,
Of Texas.
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⁂

TRIAL OFFER!

Gleanings in Bee Culture, 6 months, 25c.

We are certain that any one interested in bees would be greatly benefited by becoming a subscriber to GLEANINGS IN BEE CULTURE. We want you to give it a trial. After you have received a few numbers we are sure you will become a permanent subscriber. We therefore make a special trial offer of 6 months for 25c. Fill in your name in space below, remit 25 cents, and the paper will begin at once.

Enclosed find 25 cents, for which send me Gleanings in Bee Culture 6 months.

NAME ....

P. O. ....

COUNTY ....

STATE ....

Root's Goods in Chicago.

For the saving of freight for our western trade, as well as to give much quicker delivery, we opened a branch office in Chicago, Oct. 1, 1903. The following taken from our catalog of last year, explains the transfer then made:

The business for many years conducted by George W. York & Co., at 144 E. Erie Street, as agent for The A. I. Root Company's supplies, is this day transferred to The A. I. Root Company, to be conducted as a branch office. Please note change of name to avoid confusion in our work. THE A. I. ROOT CO.
October 1, 1903.

To Our Customers and Friends:

In transferring back to The A. I. Root Company the bee-supply business, which we took over from them some years ago, we do so with regret, as we have labored hard to build up a large and honorable trade in bee-appliances, and value beyond expression the valuable patronage accorded us during the years. We trust the same will be continued to our successors in the business.
GEORGE W. YORK & CO.
Chicago, Ill., Oct. 1, 1903.

The conveniences offered by the branch office were evidently appreciated by the bee-keepers of Illinois, Wisconsin, and other States beyond, for the business done by the branch was much beyond our expectations. During the rush season—April, May and June—orders came in so fast that, in spite of frequent orders to the factory for another car of goods, the stock ran low, and some delays and annoyances thereby were caused. Some little confusion because of change of name and manner of conducting the business (from agency to branch office), but these have all been overcome. We are better than ever prepared to handle your business carefully and promptly, and solicit your patronage.

Low Freight and Quick Delivery.

A glance at any railroad map will show the superiority of Chicago as a shipping-point. Because of the great number of railroad and steamboat lines centering in Chicago, and the large stock of goods we carry, we can give you the best of service. This office is in constant touch with the factory and home office, and in many cases can give your order quicker attention and earlier shipment than the factory, to say nothing about the saving in time and transit and lower transportation charges.

Wholesale and Retail.

We are prepared to furnish goods at wholesale and retail, the same as the home office.

Terms.

Our terms are cash with the order. We pay cash for material, and pay our helpers cash every week for their work; therefore we must have cash in advance for the goods furnished. Do not ask for credit.

Beeswax Wanted.

We are in the market for good beeswax the entire year, and pay the same prices as quoted by our home office in each issue of GLEANINGS IN BEE CULTURE. Send your wax direct to us for cash or in exchange for supplies.

Extracted Honey.

In the course of a year we use large quantities of extracted honey, and are pleased to get sample and prices from parties who have honey to exchange for supplies. We are also prepared at all times to furnish first-class honey to any one who is in need of same, either bee-keepers who have a demand for more than they can furnish, or from dealers. Get our prices before you place your orders elsewhere.

DANZENBAKER HIVE.

"Facts About Bees", a 64-page book written by Mr. F. Danzenbaker, giving a complete description of his famous hive and directions for using. Full of valuable information. Sent on receipt of a 2-cent stamp to pay the postage. **Send for it.**

The Danzenbaker Hive

THE COMB-HONEY HIVE.
Three Points of Excellence:

THE A. I. ROOT CO.

QUALITY

You can produce better-looking honey.

QUANTITY

You can produce more of it.

PRICE

You can get more per pound for it.

SPECIAL NOTICE

The great popularity of the Danzenbaker hive has brought the shallow brood-frame and the tall plain sections into prominence. It must be remembered that no other hive contains the essential features of the Danzenbaker. The success of this system depends on having everything JUST RIGHT, so you should place your order for the Danzenbaker hive with our office, or any of our branches or regular agents.

Address all Orders, Remittances, Inquiries, etc., to

THE A. I. ROOT CO., 144 East Erie Street, Chicago, Ill.

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AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

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Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor. CHICAGO, ILL., APRIL 20, 1905. Vol. XLV.—No. 16.

Editorial Notes and Comments

Great "Farm Journal" and Manufactured (?) Comb Honey

Several of our subscribers have sent us the following paragraph, as having appeared in the April issue of the Farm Journal, published in Philadelphia, Pa :

> "Bee-keeping is pleasant and profitable work, and real honey is hard to get in these days. Not only is the 'honey' manufactured, but the wax-cells as well are imitated; so that even though you buy your honey in the 'comb,' you are as likely to get glucose as not. Therefore, fragrant honey, the real product of the bees, will always find a good market, and my women readers might be able to sell it through the Woman's Exchanges."

We wrote to the editor of the Farm Journal, as Manager of The Honey-Producers' League, as soon as we learned of the appearance of the above paragraph. We called his attention to the misrepresentation of honey that he was helping to perpetuate, and also explained to him the origin of the false story about comb honey being manufactured. In reply to our letter he wrote us as follows:

> *Dear Sir:*—I am in receipt of your esteemed favor of the 25th. Yes, our good lady made a little mistake, I fear. Of course, the Farm Journal will make everything right. W. A.

It seems the paragraph quoted above appeared in a department called "Heart Problems," which is conducted by a lady who writes under the name of "Aunt Harriet." We feel sure from the above reply of the Farm Journal that proper correction will be made in the May number.

Make or Buy Hives—Which?

A member of the American Bee Journal family thinks it is a mistake for the American Bee Journal to advise beginners to buy rather than to make their own hives, he having found out by actual trial that he can do better to make them. His view, no doubt being entirely honest, deserves respectful consideration.

It is probably safe to say that the great majority of bee-keepers buy rather than make. They would not do so unless they thought they could do so at a saving. But there remains the possibility that some of them may be mistaken; possibly misled by what our friend counts the ill-considered advice of this Journal. The testimony of one who has merely gone upon the advice of others does not count for much in this case. But among those who prefer to buy are not a few who have had experience—and large experience—in both making and buying; some of them veterans who made their own hives before there were factories from which they could obtain them ready-made. Their testimony certainly is of value.

Yet in spite of all this, here comes a man who is exceptionally skillful in the use of tools, who makes his hives in time which would be spent at the corner grocery, so that really nothing need be counted for his time; he will do better to make his hives.

Now suppose ten beginners stand up in a row and propound to the American Bee Journal this question, "Shall we make or buy?" And suppose the Journal answers, "Make." According to what has been said, it is morally certain that nine out of the ten—more likely ten out of the ten—will be misled by that answer. They will find that their hives will cost them more than if they had bought them ready to nail together; and, what is a good deal worse, they will find that they are much less satisfactory than when made in quantity, with every advantage of special machinery and the most exact measurements. So if the Journal is an honest Journal, it will advise, "Buy." If one of the ten happens to be like the exceptional case mentioned, there is little doubt that he will find out very soon that he is an exception, and will act accordingly.

All of this is aside from the question as to whether prices charged by manufacturers are too high or not. Those who make hives in large quantities certainly *can* afford to sell them at lower prices than if made on a small scale. If they do not offer them at fair prices, competition should bring quotations down to the proper level.

The Honey-Producers' League

The membership dues are coming in very nicely when it is remembered that The Honey-Producers' League is only about one month old, and has just been announced to bee-keepers through the bee-papers. Since the first report on page 260, the Manager has received the following:

Gus Dittmer	$22
J. A. Green	10
C. A. Hatch	10
Robt. A. Holekamp	6
J. C. Davis	5
John Nebel & Son Supply Co.	18
Walter S. Pouder	24
J. B. Mason	12
A. Mottaz	2
W. T. Falconer Mfg. Co.	30
Alvin Long	1
Doolittle & Clark	3
C. J. Thies	1
Sadie A. Butts	1
W. B. Moore	5
A. D. Hopps	2
W. C. Scott	1
E. D. Townsend	15
Wm. A. Selser	10
	$ 178
Reported before	1045
Total	$1223

From now on the membership should grow very fast, as the objects of the League are such that they should commend it to all who either produce honey or are at all interested in it as dealers. Bee-keepers must do their own advertising, or else it will not be done. They will need to pay for it, too, else it will not be paid for. But by all combining, as proposed by the League, the expense will not come heavy on any particular bee-keeper. "In union there is strength." "Co-operation" is the thing desired in The Honey-Producers' League. If you want to see your own best success, then become a member as directed on page 259.

Go Slowly On Increase

You will then go more surely. M. A. Gill says in the Bee-Keepers' Review: "Remember, if you never make much increase, you will never have much *decrease*."

How Many Colonies in One Place

The editor of the Bee-Keepers' Review says:

> The general experience, from all over the country, is that the yield of almost any locality may be lessened by the bringing in of too many colonies; but just how many colonies it is profitable for one man to keep in one apiary has never been settled, and never will be settled, as localities, seasons and methods differ. My advice or plan would be to keep on increasing an apiary until the profits were lessened by the

increase in numbers. By this I don't mean the yield per colony has been lessened, as this might happen, yet the yield in the aggregate, and the profits, might still be increased. I mean that, when, considering the capital and labor employed, we don't make so much money because the locality is overstocked, then I would start another apiary. It may require quite a little experience to decide this, and, even then, it can't be decided indefinitely for each year; an approximate decision is the best that we can get.

Good advice; only stronger emphasis might be placed on the difficulty of deciding when the point in numbers has been reached that will yield the greatest total profit. Suppose the profit less this year than last; how is one to tell whether it is because of greater numbers or because of a poorer season? Suppose the number kept this year is larger than ever before, and the profit as well. But that is because of the extraordinary flow. Such a flow does not come again in the next 10 years, and there is a loss because the full number is kept right along. As Mr. Hutchinson intimates, it's a game of guess at best, and it is well to guess too low rather than too high.

Use the Least Possible Heat On Wax

Says E. D. Townsend in the Bee-Keepers' Review: "If you want that soft, nice, pliable wax that is so much in demand in the market, *don't ever allow your wax to boil* in any process of rendering."

Miscellaneous News ✧ Items

Mr. Fred W. Muth, of The Fred W. Muth Co., Cincinnati, Ohio, gave us a pleasant office call last week when in Chicago on business. He is a hustler from "way back"—or from Cincinnati, more properly speaking. If he doesn't get his share of the business to be had it isn't his fault.

Hurry Up Printing Co. is the firm name under which Emerson T. Abbott, of St. Joseph, Mo., is conducting a printing and publishing business. He has just recently purchased the plant and good-will of the Stewart Printing Co. of that city, and says on his announcement card, "Promptness, neatness, and accuracy will be our watchword." We wish the new concern every success.

Eastern Georgia for Bee-Keeping.—We have a request from a subscriber in New York State, who desires information concerning the eastern part of Georgia as a bee and honey country. Will some of our subscribers, who are in that part of the State, kindly let us know briefly concerning the matter, as no doubt others besides our New York subscriber would be pleased to get the information.

"Building Business and Making Men" is the title of a little 20-page pamphlet written by Mr. Frank B. White, president of White's Class Advertising Company, Chicago, Ill. It was prepared for reading before "White's Class," which is mainly composed of employees of White's Class Advertising Company, who meet monthly for the discussion of various subjects of interest to their business. The contents of the pamphlet referred to above were read at the January meeting, and at the suggestion of several public-spirited visitors who were present, Mr. White issued it in pamphlet form. Any of our readers who desire a copy can have it on request. It will well repay a careful reading, as Mr. White has had large experience with men and business matters in general.

GEORGE W. BRODBECK

It has been my great pleasure, and no less a privilege, to know intimately our departed friend, the late Secretary of the National Bee-Keepers' Association, George W. Brodbeck, for over 14 years. I have met him in the railway car, at his bee-ranch in the grand mountain canyon, at the convention, and in the quiet of the home. It has rarely been my good fortune to know one who has taken a stronger hold of my respect and affections than did Mr. Brodbeck. He was certainly a man who was deeply religious, and as sincerely determined to exemplify the teachings of the Master in his life and work as any one I have ever known. His kindly sympathy was ever manifest. When any proposition was urged his first question was, Is it right, and best? If there was any possibility that wrong could come to any one, then his opposition knew no bounds. If any contemplated enterprise promised benefit to those interested, especially to his bee-keeping brothers, then his enthusiasm and willingness to sacrifice in such cause was almost phenomenal. There is little wonder, then, that he was a leader in whatever concerned the bee-keeping interests of our State. There was no wonder that he was choice for Secretary of the National Association; there was no less wisdom shown in selecting him to be President of the business organization from which so much was hoped in aiding the bee-keepers to market their honey.

As suggested above, it was once my pleasure to visit the apiary of our friend in one of the most beautiful and romantic spots in the San Bernardino range of mountains. Like all our best bee-keepers, Mr. Brodbeck was exceedingly neat and methodical. I feel sure that method, or system, in all his work might almost be said to be his watchword. I think I never saw a more neatly arranged apiary, or one in better condition in every way, in all the apiaries that I have visited in our State than was this. Indeed, one may safely say that Mr. Brodbeck may be called the Hetherington or Bingham of California. He was no less a student than a practical man, and thus he was an up-to-date bee-keeper. He not only practiced the best that prevailed in other apiaries, but like all our bee-keepers he had many time-savers, short-cuts, and ingenious inventions and methods peculiarly his own. Those of us who used to enjoy his presence in conventions will remember how earnestly he used to father any proposition that looked to the advancement of our apiarian practices and methods.

One only needed to know Mr. Brodbeck but slightly to recognize at once that he was one of our most clean and pure men. It is a firm belief of mine that a clean heart is almost always indexed in the face. Mr. Brodbeck was no exception. It was no wonder, then, that when his name was proposed for the Secretary of the National Association all of our visiting delegates, who had enjoyed looking into his kindly eye, united with us at once in giving to our revered friend this proud honor. Such clean, true men as Mr. Brodbeck are the glory of any country. Such men always have beautiful homes, and beautiful homes are a very bulwark against everything vicious and mischievous. Mr. Brodbeck was the head of such a home; and the spirit of the man was felt as soon as one entered his household.

Mr. Brodbeck was an earnest, faithful, consistent member of the Methodist Church. His brother, Dr. Brodbeck—these two brothers were very dear to each other—has been for long years superintendent of one of the largest and most successful Sunday schools in the city of Los Angeles. All those who were so fortunate as to be present at the Los Angeles meeting of the National Association, will remember the delightful music which charmed us all on that occasion. This music was rendered by the orchestra of Dr. Brodbeck's school, and, as I remember, was a free gift.

Our friend was one of those rare spirits who carry every principle of their religion into their daily life. It may be said of him almost as truly as of any one I ever knew, as was said of the Master, "He went about doing good. In his life there was no guile."

That Mr. Brodbeck had the confidence of our hard-headed business men is apparent from the fact that he was elected President of the California National Honey-Producers' Exchange. This organization undertook a great work, along untried lines, which promised great things, but which demanded great tact and the best judgment to carry it through to the desired success. I am sure that no one ever regretted this choice, and I am sure that this organization has met a serious loss in the death of its very able President.

Mr. Brodbeck was a native of Lawrenceburg, Ind., a little west of Cincinnati, where he lived until he was married. His early home was very precious to him, and he endeared himself thoroughly to all its members. His married life was an extremely happy one, as he was a very affectionate and devoted husband. This couple were not blessed with any children, which misfortune, I am sure, they both deeply regretted. They had, however, a very merry family, for they both were great lovers of dogs, and they had numerous dog pets, which seemed almost like members of the household. I well remember when I visited Mr. Brodbeck's apiary what a kind greeting I received from the canine part of the community. Mr. Brodbeck's affection for the dogs was most clearly apparent, and this feeling was fully shared by his good wife, who survives her husband, and is now living in Los Angeles. The first years of their wedded life were spent in Edinburg and Indianapolis, Ind., where he first became interested in bees.

In 1887 Mr. Brodbeck first came to Los Angeles, where he resided until the time of his death. In the autumn of 1903 there were extensive forest fires in the canyon where his apiaries were situated. Undue exertion and exposure in trying to check these fires brought on an attack of pneumonia in January of the following year. from the effects of which he never recovered. His death occurred Feb. 6, 1905. He said repeatedly that his mind was not set on the things of this world, but that if it were God's will he wished he might recover that he might do more good. An intimate friend remarks of him, that "the greatest desire of his life was to help any one who might come in his way, never expecting or wishing any reward for his labors."

I am sure I voice the sentiments of the entire bee-keeping brotherhood of California, when I say that I feel that in the death of Brother Brodbeck I have sustained an irreparable loss. and feel that another attraction is added to the great Home towards which we are all hastening.

A. J. Cook.

Los Angeles Co., Calif.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Opinions ∻ of Some Experts

Amount of Comb Surface to Be Capped for Distant Market

Ques. 25—*What portion of the surface of a section comb should be capped when packing for distant markets?*

S. T. Pettit (Ont.)—All, or very nearly so.

Eugene Secor (Iowa)—At least 95 percent.

Rev. M. Mahin (Ind.)—All of it, if possible.

C. P. Dadant (Ill.)—All of it, in my judgment.

Jas. A. Stone (Ill.)—All capped for any market.

Arthur C. Miller (R. I.)—I do not ship honey.

L. Stachelhausen (Tex.)—The whole, if possible.

N. E. France (Wis.)—The more capped the better.

Mrs. J. M. Null (Mo.)—Practically the whole of it.

Dr. J. P. H. Brown (Ga.)—I should want it all capped.

P. H. Elwood (N. Y.)—Practically all. If not all, put in lower grade.

G. M. Doolittle (N. Y.)—All but the cells bordering on the section.

Wm. McEvoy (Ont.)—All. Ship the very best, every time, to any market.

Morgan Bros. (S. Dak.)—99 percent; second grade honey, 85 percent.

J. A. Green (Colo.)—All of it, except possibly the row of cells next the wood.

C. H. Dibbern (Ill.)—It should be *all* capped, unless it is a few cells next the wood.

J. M. Hambaugh (Calif.)—The more capped over the better. The less uncapped the better.

E. D. Townsend (Mich.)—All in Fancy and No. 1, from three-fourths to nearly all in No. 2. Anything less is extracted.

E. S. Lovesy (Utah)—The entire surface. It can hardly be classed as first-class unless it is well filled and nicely capped.

Adrian Getaz (Tenn.)—All but the next row or two of cells adjacent to the wood. If all could be capped it would be still better.

E. Whitcomb (Nebr.)—All of it. Every cell, if we expect to get a fair price, and not have the combs mussed with leaking when they arrive.

G. W. Demaree (Ky.)—The entire surface of the section should be sealed, though a few open cells at the outer edges may be tolerated without loss.

O. O. Poppleton (Fla.)—I have supposed that section combs should always be all sealed when packed for any market, either near by or distant.

Prof. A. J. Cook (Calif.)—If I understand this aright, I should answer, all of it. I would not ship section honey or comb honey that was not wholly capped.

R. L. Taylor (Mich.)—Practically all of it. An occasional comb might have to the amount of a square inch not capped if it has other excellencies to counterbalance.

C. Davenport (Minn.)—The more the better. But if comb honey is ripened as it should be before it is shipped, there will be no leakage from any cells that may be unsealed.

R. C. Aikin (Colo.)—In general, all but the outside row, but the rule should not be iron-clad. Other points being good, a few other cells open in a comb otherwise *fine* should not exclude it.

E. E. Hasty (Ohio)—All except the outer tier of cells; and better have them filled, and capped, too. A very few empty or uncapped cells need not disqualify except for the highest grade or grades.

Dr. C. C. Miller (Ill.)—It may be that no unsealed cells at all should be allowed, if that's the agreement; and an agreement might be made for sections with one-fourth of the cells unsealed. Of course the price should vary accordingly.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get them subscriptions, for which work we offer valuable premiums in nearly every number of this Journal. You can aid much by sending in the names and addresses when writing us on other matters.

✣ Contributed ✣ Special Articles

The Bees Against Spraying Fruit-Trees While in Bloom

BY GRANT STANLEY.

A PETITION.

To Solicit the Sympathy of all Fruit-Growers and Rural People Everywhere, We, the Bees, Make this Our Most Humble Petition:

We believe we know you much better than you think we do—we know you much better than you know us. We play a very important part in Nature's laws. Yes, we are afraid much more than you care to take time to think. We have a great mission in the pollenizing of fruit-bloom alone.

There is scarcely a fruit-grower or rural citizen that does not understand the pollenization of fruit-bloom; they also know that the wind is a great agency in pollenizing fruit, but, do you know, dear people, that if no wind is blowing at all while the trees are in full bloom, the wind could not be counted upon to do much distribution of pollen, while the less wind there is the more we come forth to complete this pollenization, not only making it thoroughly effective, but at the same time gathering this otherwise wasted sweetness for our little ones?

The people who are acquainted with us most are our best friends. A great many large fruit-growers keep many colonies of us on their lands to pollenize their fruit. A great many people do not like us on account of our sting. Now you know that all living creatures are provided with some weapon of defense, and if we were not provided with the sting we would have become extinct centuries ago.

It is also our mission during our short stay here (and it is short, only about 38 or 40 days during the honey season) to gather this wasted sweetness for the benefit of mankind. You know the Bible says, "Eat thou honey because it is good." Where is the child that does not like honey, or, in fact, the grown-up? And well they may like it; it is the greatest sweet known to man, much superior to the best sugar, from the fact that honey is a pre-digested food and requires no work of the digestive organs before it can be taken up by the body.

In this age of adulteration the woman of the household, if she be prudent, will see that our product graces her table. Honey is used in large quantities for the compounding of medicines; it also has many other uses, and if honey were used in pastry instead of so much sugar, we would hear less cry about indigestion.

We have a very sad tale to tell you, and a tale that is of great importance to you as well as to us. Thoughtless and indifferent people are spraying their trees while in full bloom, and few of you indeed know the injury inflicted upon us as a result. Do you know that about the time of fruit-bloom is a time when we can ill afford to lose any of our family? We have been quietly reposing in our homes all winter, many having passed away, and now during fruit-bloom we rush forth with our ambitions keyed to the highest pitch in an effort to provide food for our babies and replenish our stores consumed by our long repose. This food is about all used to feed our little ones, which are coming into this world of action by the thousands daily, and consequently the food we get from fruit-bloom is of vital importance in order to bring our colony up to a degree that we can secure a surplus for you.

Fruit-growers and men who have investigated this question thoroughly, now claim that it is very wrong to spray fruit-trees while in full bloom, claiming that equally as good if not better results can be obtained by spraying the trees *just before the buds open* and again *when the petals of the blossoms begin to drop*, as by this time other flowers have sprung forth and we have gone to visit them. Spraying at this time will also be found most effective against that greatest enemy of the apple—the codling-moth.

Some States have laws prohibiting the spraying of fruit-trees while in full bloom, and the object of this letter, dear people, is to appeal to all rural people to withhold their spraying operations for the few days of fruit-bloom, and, in return for this most humble favor, we assure you that we will reciprocate it with an increased amount of honey, health and happiness for you all. Lycoming Co., Pa.

Bees Crowding to the Super Center

BY S. T. PETTIT.

On page 616 (1904), Mr. Hasty writes:

> "S. T. Pettit will think I'm queer, but I doubt if he can abate much the inclination of bees to crowd into the center of a super. Even if he puts a thin septum below and makes all the bees go up front, rear and sides, I should doubt still. Bees don't seem to regard a thin septum *if it is entirely surrounded with bees.* They know where the center of things below is, and, as a matter of preference, prefer to be exactly over it."

I want to say that I never used, nor suggested the use, of thin septums, nor any other kind of septums for the use as stated by Mr. Hasty. Those belong to the late Mr. Golden. I use long wedges at the right time and condition of the bees to enlarge the entrance, and also to cause many of the bees to go up at the sides and toward the rear end of the hive.

He says: "They know where the center of things below is, and as a matter of preference prefer to be exactly over it." There may be something in that, but experience says not much. Mr. Editor, if ever a bee crawls into one of your ears, it is not because it prefers to get nearer the center of your cogitating machinery, although a fortuitous observer might think so. It is suffering from the cold, outside air, and crawls to get warm. In that case don't injure that little pet, even if it does emulate the roaring of a train of cars. Just go into a warm room and in a short time it will be against a window-pane. You see it is not all preference for the center of things, but very largely conditions that govern.

Take a strong colony in a hive not too large. By some means keep the super snug and warm, so that the temperature of the interior is right for comb-building; and depend upon it, in almost all cases in a good honey-flow, work will begin nearly simultaneously in all parts of the super. They don't seem to care much where the center is, if only the heat is right day and night.

In this connection I want to say that many bees congregate where the field-bees go up. If they go up at the center, the center will be congested; if they go up at the sides, the congestion will be abated, and they will have elbow-room to work—a very necessary condition for rapid work. So there is much—very much—in having them go up right; and also in having them provided with properly made *dividers* at the sides of the super. I think that Mr. Hasty and I are not so very far apart, after all, for farther on he says, "In cool weather there would be a gain in throwing more warmth into the outside sections." Exactly so, and as in almost all localities there is "cool weather" two or more nights in every week of the year, the argument is conclusive, that there would be a gain in conserving and distributing the heat from the time of giving sections.

A divider like the Root fence, with two exceptions, will give good results. First, the spaces between the slats should be ¼ inch; and, second, they should be spaced 5/16 to ⅜ inch from the super walls. In many cases the sections will show ridges opposite the spaces, but I never had a customer object to them on that account, nor would I.

Bees can not acquiesce, cluster and feel free and easy in a space only ⅙ of an inch. They never make that kind of spaces for themselves; they can not, in such cramped quarters, glide into the contented comb-building mood; nor is there room for a cluster to keep up the necessary heat for comb-building.

I can not conceive that it is fair and just to say that such dividers are practically as good as those that are properly made and spaced. I prefer those with holes, but slatted dividers, properly spaced, give good results. Here we are again, right in front of the manufacturer's view-point.

Ontario, Canada.

Honey as a Health-Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food", written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey". It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey the more honey they will buy.

PRICES, prepaid—Sample copy for a two-cent stamp; 50 copies for 70 cts.; 100 for $1.25: 250 for $2.25; 500 for $4.00; or 1000 for $7.50. Your business card printed *free* at the bottom of the front page on all orders for 100 or more copies. Send all orders to the office of the American Bee Journal.

Branch Houses and Bee-Supply Prices

BY F. GREINER.

At the Harrisburg (Pa.) meeting Mr. Selser should have included several other bee-supply manufacturers who also have established branch houses when he said the Root Company have brought the bee-supply business to the door of the bee-keeper, and that they are real benefactors to the bee-keepers. Mr. S., however, conceded that the establishment of such branch houses was costing the bee-keepers some money, as it had raised prices on the supplies. This is undoubtedly true, and we deplore it. It seems, as far as the bee-keeper is concerned, all the branch houses with their increased cost of supplies are superfluous.

Why can not the bee-keeper have sufficient forethought and provide himself with supplies at an early date? There is no need of his waiting till sections and hives are wanted before ordering. I have been in the bee-business about 30 years, and I have never been obliged to buy supplies during the hurry of the season, and if all bee-keepers ordered everything during the winter there would be no need of branch houses and consequent higher prices.

Some years ago, toward the close of the honey season, one of the Western manufacturers advertised "cheap sections." They were seconds, and the price asked was $2.00 per 1000. I laid in a supply for an emergency. I do not expect to make use of these sections until perchance one of those extra-good honey seasons comes along when even fence-posts will secrete honey! There is not a great deal of money tied up, and I need not worry that my supply of sections will run out. If bee-keepers will watch the advertisements in the bee-papers they may find equally good chances.

DISINFECTION FOR INSPECTORS.

Great importance should be attached to what Dr. Hayes said at the Harrisburg meeting in regard to sterilizing or disinfecting the clothing of the operator after handling foul-broody bees; also disinfecting his tools, etc. He says "the bacillus [and spores in particular] can be carried in many ways heretofore not thought of." It is my opinion that foul-brood inspectors should exercise a great deal of care in this respect, and I should make a vigorous protest if a foul-brood inspector, coming from a diseased yard, should want to enter my premises until I was satisfied that his clothing and tools used had been subjected to salicylic acid fumes, or something similarly effective. I know others—some having had the experience—who are fully as anxious as I am in regard to the matter. It is a very serious matter, my good friends and foul-brood inspectors, to be "peppered" with the disease. Frank Benton claims to know of foul-brood inspectors giving the disease to other yards. Dr. Hayes says it may be carried under the finger-nails.

It is often stated that black brood first developed in colonies imported into New York State from a Southern State. If this is true, why is it the disease has not been discovered so far in a State in the South?

AMOUNT OF BEES IN A BABY NUCLEUS.

Mr. Pratt's statement in regard to queen-rearing, made at the Harrisburg meeting, interested me greatly. He said: "Twenty-five bees are a sufficient company for a queen in a baby nucleus. Fifty bees will do better. More than a teacupful is a decided disadvantage."

The above statements are made from the queen-breeder's standpoint, and in so far are undoubtedly true; but what does the queen say? It is not so clear to the honey-producer and purchaser of queens why more than a teacupful of bees should be disadvantageous. "Twenty-five bees may do; 50 do better; a teacupful perhaps still better." And *there* seems to be the limit. I can not see the reason why. I am not a professional queen-breeder.

Ontario Co., N. Y.

Convention Proceedings

Worcester County (Mass.) Convention

Members and friends of the above Association dined and met socially on an afternoon in February, and listened to an address on diseases of bees by Mr. Arthur C. Miller, of Rhode Island. The occasion brought together as many people interested in the busy bee as had ever been congregated in Worcester County.

At 2:30 o'clock Pres. Drake called the meeting to order, and introduced A. A. Hixon as presiding officer. After remarks of welcome by Secretary Hixon, of the Worcester Horticultural Society, O. B. Hadwen, a veteran horticulturist, was introduced. He told of the bee being the first live stock he kept on his farm, and of the profit and pleasure it furnished, besides being of inexhaustible study in Nature.

Burton W. Potter, President of the Agricultural Society, said he first kept a colony of bees for pleasure, and to get honey for home consumption, but now he has an apiary of 5 colonies at his farm. He thought the bee an indispensable factor to plant life and fruit-trees.

F. H. Farmer, President of the Massachusetts Apicultural Society, and H. H. Jepson, also spoke of the work of the bee and the bee-keepers.

Following these introductory remarks the speaker of the afternoon, Arthur C. Miller, was introduced, and spoke as follows on

DISEASES OF BEES

At the start I wish you to understand that the ailments of bees are not of such a nature as to endanger humanity through eating the honey or handling the bees.

Eminent authorities suspect that much that is written of the diseases of bees is fanciful and most of the ailments originate from want of cleanliness or want of food. Bee-keepers are wont to consider their knowledge of the bee as modern, whereas knowledge and practices differ but little from those of two centuries ago. Valuable ideas of early bee-keepers have, as well, been lost sight of.

Bee-ailments, as known to-day, may be divided into two classes, those due to germs and those due to nutriment, but the degree of malignancy of the former is often dependent upon the bee's food.

Foul brood is the only germ disease positively known as such. It attacks bee-brood and causes foul decomposition. Black brood is by some supposed to be foul brood, modified by some unknown cause. Pickled brood is another disease of unknown origin. Paralysis attacks the adult bee, and symptoms point to its being caused by bacteria. Aside from foul brood, the diseases mentioned are not common.

Dysentery, which decimates bees in the spring, is ascribed to no one knows how many causes. Tumefaction of the antennæ is of rare occurrence, and has been noticed mostly in queens. The ends of the antennæ become enlarged and turn yellow. This extends to the front of the head, and the bee soon dies. Vertigo, whose symptoms are a dizzy manner of flying and irregular motions, followed by lassitude and death, is another disease. It is ascribed to nectar from such plants as laurel, azaleas and rhododendrons.

At varying times and places, what seem to be different diseases, becomes epidemic, and whole districts become depopulated of bees. Careful analyses of the conditions preceding and during bee-epidemics, point to food as being at the bottom of the trouble. Hereditary impaired constitutions are also a potent factor in inviting disease.

Until recent times it was the custom to destroy the heaviest colonies for their honey. This destruction of the strongest left the less vigorous to perpetuate the species. Evil results finally became so obvious as to arrest the attention of bee-keepers, and methods were devised to obtain part of the honey without destruction of the bee, also of taking the less populous colonies and saving the heavy ones for stock. Next came an era of excessive and unwise manipulation, resulting in a great loss of bees.

I know of no practice that has been more productive of harm than that of spreading the brood to increase the strength of colonies. Brood killed in this way furnish a hot-bed for breeding disease-germs. The advent of the Italian bee was hailed as a panacea for all ills in beedom. It did infuse new life into the bee.

Now again bee-disease appears in all directions, and in all degrees of malignancy. Have any of you noticed that the spread of disease is coincident with the so-called cell-cup system of queen-rearing? Proper rearing and development of queens is essential to well bees.

Faults along these lines we can overcome, but curing illness well seated is not so easy. Treatment of any of the diseases by drugs is difficult and uncertain. Success has been obtained in eradicating foul brood by the use of izal. Bee-paralysis has been controlled to some extent by the use of flour sulphur. The first thing for us to do with any disease is to remove all unclean matter, give the bees clean, dry quarters, sound stores and a healthy queen.

The McEvoy treatment of foul brood is to take the bees from everything they had, and keep them from combs or brood until their stomachs are presumably free from the germ, then give them a chance to establish a new home.

Dysentery appears to be a germ disease, which is always present, awaiting favorable conditions to develop. In handling bees we must avoid extremes of heat and cold, and do not change the proportions of nurses to brood so that the latter are liable to suffer from want of food. With bees, as with humanity, an ounce of prevention is worth several pounds of cure.

ARTHUR C. MILLER.

Following the talk by Mr. Miller, he was interrogated upon various phases of bee-life, successes and failures of bee-keepers.

Several of those present were enrolled as members of the Society at the close of the meeting.

It was announced that plans were being made for at least two summer field-days, when the bee in life could be studied.

Our Sister Bee-Keepers

Conducted by EMMA M. WILSON, Marengo, Ill.

A Light-Spring Bingham Bee-Smoker

The head of this department hereby tenders thanks to Mr. T. F. Bingham, the veteran smoker manufacturer, for one of his instruments that he thinks will please on account of lightness of spring. A very interesting departure from the ordinary is the manner in which the nozzle is put on. The usual way for a detachable nozzle is for it to telescope over the upper part of the fire-box. Instead of that, in the present case, the telescoping is the other way—the nozzle is shoved down a certain distance into the fire-box. The evident intention is to avoid two objectionable things First, the loose fit and dropping off of the nozzle; second, the loose fit that allows the smoke to escape before it reaches the point where it can do the most good. Whether it accomplishes these purposes can only be told after it has been in use long enough to have all the pretty, new look disappear, but it certainly looks hopeful.

Right here it may not be amiss to protest against the idea that a light spring is a desideratum only in a woman's hands. Anything more than sufficient stiffness to throw the bellows open and still allow a sufficiently firm grasp to prevent the smoker from falling means only a waste of strength. While a giant might handle with ease a spring with twice the necessary stiffness, there is no sense in wasting a giant's strength in that way.

A Swarm-Hiving Experience

DEAR MISS WILSON:—As we take the American Bee Journal, and as I enjoy the Sisters' department, I will give my experience in hiving my first swarm of bees.

I had often helped my husband with his bees, and was more excited than he was when a swarm came out. I had long wanted to show my ability in hiving bees, and often thought I could have done better than he did—and perhaps had said so.

My chance came one fine wash-day. My husband had gone away from home. So, on looking toward the apiary, I saw the bees swarming. I quickly donned my bee-veil and gloves, and hastened out to see from which hive they came. I was pleased to find that the swarm had a clipped queen. Then my fear was not that the swarm would leave, but that I might lose the queen.

I searched for her, and finally found her at the corner of the hive. I induced her to crawl into my hand, and carefully carried her to where the swarm had kindly (in consideration of me, of course) settled on a low plum-bush. I let the queen crawl into the swarm, which was a fine, large one. I then got a hive and placed it on a stool-chair which I had covered with a canvas.

I then arranged the frames against the sides, allowing the lower part of the swarm to come between the frames. I gave the limb a quick blow with an ax, and down they fell almost all into the hive, and the rest on the canvas. I quickly placed the hive-canvas over the seething mass, and to my delight saw those on the canvas soon going toward the hive. With a weed I agitated them, and was glad to to see almost all going into the hive. I gently lifted the frames in place without removing the canvas, put the cover on, and my swarm was hived.

So intent had I been with my work that my husband had returned, slipped up, and had been a silent witness of my performance, so when I finished and looked up there he was grinning at me from behind the plum-bush. And said, "Bravo! Well done!"

Well, in an hour my bees were working as though they had always lived there. I was interested, and watched them a great deal.

We examined them in 10 days, and I was delighted to find such lovely sheets of well-filled comb, but found no eggs or brood. In a few days we looked again, but still no brood. Finally the bees began to dwindle, and I decided they must have a new queen. The old clipped queen was there all the time. How I disliked to take out the mother of so fine a swarm and kill her! My husband decided to put her in his observatory hive and kept her for some time.

We gave the bees a sheet of comb with brood and eggs from which they reared a fine queen, built up, and went into winter quarters in good condition.

My clipped queen never, to our knowledge, laid an egg after she came forth with the swarm. She left the parent hive well-filled with brood and eggs. She was one year old. Although small, she was considered one of my best queens. What was wrong with her?

Saline Co., Kan. MRS. F. G. B.

You succeeded very nicely with your first attempt at hiving a swarm, but let me tell you of an easier way to hive it when it has a clipped queen. When the swarm comes out find the queen and put her in a queen-cage (which is well to have handy before the bees swarm). Now remove the hive from which the swarm issued to a new stand, and put in its place the new hive. Lay the caged queen on the entrance of the hive where you wish the swarm to go, and then all you have to do is to stand still and watch those bees come back of their own accord and hive themselves.

When they have started crawling in nicely liberate the queen and let her march in with the rest. That's all—easy, isn't it? But you must not waste any time about it, or those bees may come back before you are ready for them.

I am sure I don't know why that queen should stop laying unless she was accidentally injured in some way during the swarming.

* * *

Using Honey from Hive Where Bees Died

The bees in one of my hives are all dead, but there are left 3 frames full of honey and 3 that are more than half full.

1. Do you think this honey will be all right to feed to any of the other colonies, if they need it, or is there danger that something is wrong with it?

2. I had them packed well, with cushions on top. The bees were in one end of the hive. Do you think they were queenless, or were they killed by the cold? I did not notice any bad odor coming from the hive, and there did not seem to be anything wrong except that they were dead, and the hive was a little damp.

Cumberland Co., N. J., March 8. MRS. SARAH J. GRIFFITH.

1. I would feed it to the others.

2. They may, and they may not, have been queenless. In any case they were probably weak, and died of starvation, although there was plenty of honey in the hive. Having used up all the honey within reach, the continuous cold weather did not allow them to leave the cluster to get a fresh supply.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

THE HONEY-PRODUCERS' LEAGUE AND COMB-HONEY GUARANTEE.

As to the League, and the exceedingly important matter presented on page 259, I am not nearly ready to say all I think about it. On one particular point I can say what I think. Don't, please don't, raise the guarantee higher than a thousand dollars. The public have more sense than you give them credit for, brethren. They have been dazed and bored, and fairly *forced*, into a safe and sane conclusion by the myriad offers in the press of $50, and $500, and $1000, and $10,000—big money for something and everything and nothing—great sums for solving little puzzles so childishly simple that one could hardly help solving them if he tried. The safe refuge of conclusion has been reached that business does not consist in giving away money, and that all such offers are deceptive—pure bluff it may be—prearranged it may be—at the very least with some invisible string attached to them. All folks with an atom of sense incline to pay no more heed to them than they do to the fat pocket-book that lies so temptingly on the walk April Fool's Day. To illustrate what I mean, let me ask this question: Why not offer a *million* dollars? You reply, That would defeat itself; because each man would laugh and say, "These people haven't got a million dollars, and they are making no arrangements to raise it." Well, just as little should we be making any arrangements to raise the $10,000; and folks would conclude so. The child's, "Bet you five thousand million dollars," does not secure any assurance. And when the quack doctor offers $10,000 for a case which his remedy will not cure, few people hustle to get the money—in spite of the fact that they *know* that there are multitudes of incurable cases in the world. Let's not imitate the quack doctor. The guarantees that have have been offered in the past have *silenced* many people; but probably three-quarters of them have not been fully convinced—still inwardly believed that comb honey was being manufactured—and also that it would be foolishness to spend time and dollars in the effort to get that money.

What then? Either let the guarantee business rest just where it is, or raise the sum and put it up in some bank window where the incredulous can be sent to look at it. Buy a first-class, interest-bearing, thousand dollar bond. Fully explain the whole sad matter to some friendly State governor, and ask him to act as holder of the bond, and to keep it deposited in the bank that will give it show-room. Appoint three reliable men, only one of whom shall be a bee-keeper, to act as awarding committee. Then we should have things in shape so we could say, "Tell you right where you can see a thousand dollars that you can have by proving what you have just been saying."

FASTENING FOUNDATION TO SECTION'S FOUR SIDES.

H. G. Sibbald, of the Ontarios, seems to succeed in fastening foundation to all four sides of a section. It doesn't bulge for him, we should infer, as bulged honey would hardly take first prizes. Page 146.

GUARDING AGAINST INFECTION OF BEE-DISEASES.

Prof. Harrison, of the Ontario Agricultural College, is one of those who encourages the minimum amount of care in guarding against the infection of bee-diseases. Even says that diseased bees, when visiting flowers, may leave infection there which healthy bees may subsequently take. He also asserts that disease is sometimes carried by foundation. Naturally he is not caught in the absurdity of asking the apiculturist to disinfect his hands—and never mind disinfecting the hive, which has had foul-broody bees running over its walls for months; and more or less daubed with foul-broody honey at that. Page 147.

SINGLE VS. DOUBLE BROOD-CHAMBER COLONY.

A. E. Hoshal says a single broob-chamber colony (Heddon) will give as much honey as a double brood-chamber colony in a short season. Wonder how he figures that out (providing it's so). Some of us would say that strong colonies would have more advantage in short flows than in long ones. Also, I should protest his don't care if old bees are killed in uniting. Looks to me like a disgrace which a little more care and "gumption" would avoid. Page 149.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. MILLER, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Management in Swarming

If when a colony casts its prime swarm I deprive it of its clipped queen as she emerges from the hive, and 7 days later destroy all queen-cells except one, will such colony be likely to swarm again, and would such management be practical? MISSOURI.

ANSWER.—It may work all right *if* you don't miss any cells. A variation of the plan would be to wait till you hear the young queen piping in the evening, and then cut out *all* cells next morning. You would be a little surer of a good queen in this latter way, for it might happen that by the first way you would leave a cell containing a dead larva; for dead larvæ are sometimes found in cells that look all right.

* * *

Bees in the Attic—Inbreeding

I have my bees in the attic facing east, and it is so arranged that the temperature can be controlled during the winter months. During our most severe weather the past winter it has not been below 32 degrees, and never above 40, unless the weather out-of-doors was warm enough for them to have a flight.

1. What would be the best temperature and cause them to consume the least amount of stores, with the hive-entrances open to the weather at all times as they are now?

2. Would they consume less stores and winter more satisfactorily

if the hives were put in the center of the bee-room, and the room darkened as in cellar-wintering?

3. Could I buy one Italian queen and rear queens from this one to Italianize the rest?

4. There would be no drones to fertilize my queens except drones from the same queen or mother as themselves. Does this inbreeding of bees amount to anything? Isn't it a detriment to the future generations? I have never seen anything on the subject.

NEW YORK.

ANSWERS.—1. About 45 degrees, but there is a good deal of variation in thermometers.

2. I think not.

3. Yes.

4. Inbreeding is not desirable, but in this case there would not be much chance for it.

Preventing Robber-Bees

I have noticed that there are strange bees robbing mine of honey. How can I prevent this? ILLINOIS.

ANSWER.—The chief thing is to help them to help themselves by keeping them strong and by avoiding things that will tempt robbers to start at their work. A queenless colony is a fair mark for robbers. Break it up and distribute bees and brood among other colonies. Keep the entrances of weaker colonies so small that the bees can easily guard them. Don't allow brood-combs or combs of honey to stand exposed to tempt robbers. Don't open hives at a time when robber-bees are troublesome. If for any reason you must open a hive at such times, do it in the evening after flying has ceased.

Feeding "Cider" Honey from Hive in Which Bees Died

I find upon examining my hives this spring that 5 colonies have died, the frames being all filled with sealed honey except the brood-nest, which they filled late last fall with sweet cider, and the cider soured and killed the bees.

Will it be safe to give those frames to other colonies as they are, containing honey and sour honey not sealed, but no bad odor? WASHINGTON.

ANSWER.—Perfectly safe to give to the bees after they are flying daily, to be used up in rearing brood. Only look out that it does not go into surplus, and that it is not left for next winter's stores.

Stimulative Feeding—Transferring Bees

1. Would uncapping a little comb every day be as good for stimulative feeding as syrup made from granulated sugar? There is plenty of honey in the hive, and I want the bees to build up so that they will be booming when the honey-flow comes on.

2. I want to transfer the bees into a dovetailed hive. When is the best time to do it? NEW YORK.

ANSWERS.—1. Yes, and very likely you may save yourself so much trouble. Every 2 or 3 days may do as well as every day. If the queen is laying all the eggs the bees can cover, it is hardly worth while to take even that trouble, for stimulating can hardly help, unless it be that it gets up extra heat in the hive.

2. In fruit-bloom is a good time, but it is perhaps better to wait till the bees swarm, then hive the swarm in the new hive, and 21 days later break up the old hive. In case they fail to swarm, you can then transfer when other bees are swarming.

Cover for Brood-Frames—Breeding Queens

1. What arrangement of quilts, enameled cloth, etc., do you prefer between the brood-frames and cover?

2. Will a queen breed better drones when two or three full years of age than when one year old?

3. It is commonly recommended to breed from the queen whose bees gathered the most honey the preceding year. Such a queen is supposed to be a full year old; or, as we commonly say, in the second year. In your experience, are the best queens bred from a queen in her third season if she has been worked to her full capacity the two preceding seasons?

4. Do you think the best queens are the daughters of best queens; or, as often is the case in breeding poultry, is not the prize animal or insect obtained by crossing extremes? In other words, should we breed by records or by characteristics? Great vigor, with high intelligence, for example.

5. If the best queens come from the best mothers, why don't we have more of them? MICHIGAN.

ANSWERS.—1. Between my top-bars and hive cover there is nothing in the world except about a fourth of an inch of air.

2. I don't think she will. The idea probably comes from thinking that a young heifer will not have so good a calf as when older; but remember that a queen is not young in her first year; the first year is a third or a half of her active life.

3. I don't know for certain much about it; but I doubt that it makes much difference whether a queen is a month old or several years old, so far as her queen progeny is concerned. Of course, one is not likely to breed from a queen until she has had a full season's work to show what she can do, and if her record was all right I wouldn't object to using her if several years old.

4. As a common, every-day bee-keeper, and not a scientist, the only way I have to judge of the characteristics of a queen is by her record, and the one that gives the most honey has for me the best characteristics. The question of crossing is a separate affair, and there is no doubt that very important results may be obtained by the right kind of crossing in bees as well as other animals.

5. I don't think that I can tell; but I think I can give one reason The best queens, as a rule, are little given to swarming, and vice versa. Here's a queen that sticks to her knitting, never swarms, and is superseded when three or four years old. It is easy to see that left to herself she will give only the one royal descendant, while another queen that runs to swarming rather than gathering will in the same number of years leave 30 or more.

Moving Bees in the Spring

I desire to establish an out-apiary, but bee-keepers tell me that it is too late now to move the bees, as many field-bees would get lost, because they would fly straight from the hive, as they were in the habit of doing on the old place, and would not find the way back to their new location.

Do you really think that it would be objectionable to move bees after they have started to gather considerable honey and pollen? I have to move some of the bees about 4 or 5 miles, and others only about ¾ of a mile. How about the last distance? TEXAS.

ANSWER.—Without special precaution, a colony of bees, at a time when they are gathering, if gently moved only a few rods, may be safely counted to be depleted of all field-bees, which, upon returning from the field, will return straight to the spot where stood the old home. If moved a half mile, not so many will return to the old spot, and practically none if moved a mile or more. How many would return of those moved ¾ of a mile would depend somewhat upon circumstances. If, after removal to their new quarters, they should strike upon forage ground with which they were already familiar, they might return from it to the old spot. But the jolting and jarring of the trip will help to make them mark the new spot when the entrances are opened, and you might help matters by blowing in a little smoke and pounding on the hive just before opening. Mr. Scholl, in Gleanings, reports entire success in moving 50 colonies 100 rods in the following manner:

Before bees fly in the morning close entrance with moss or green grass, and move to new location. Open entrances next day, or else let the bees gnaw their way out themselves. If very warm, a piece of section under cover may afford ventilation. When Mr. Scholl's bees were moved it was pretty cool, and even with the cover slightly raised it might be well to look out for suffocation.

Feeding Bees—Putting on Supers

1. How much sugar-water shall I feed my bees this spring? "They can drink a pint of it in 3 hours."

2. When shall I stop feeding them?

3. When can I put on the first super?

ANSWERS.—1. Not so much as you are likely to think advisable. If they have plenty of stores, it may not be best to feed any. If lacking in stores, feed till they have abundance. It is not well to feed on days when they can get plenty from the fields, nor on days so cool that the bees could fly out and be chilled.

2. The preceding answer will decide that.

3. When you see white wax along the top-bars and upper parts of combs; or, as you are in a white clover region, any time within a week after you see the first clover blossom.

Prevention of Swarming

Suppose hives Nos. 1 and 2 were to cast swarms only 2 or 3 days apart, and be hived on three frames of brood which are taken from the parent colony, the remaining 7 frames containing half sheets of foundation; now if one does not want much increase how would it do to cut out all queen-cells except one, in one of the old hives, and then unite the two old colonies by placing a few sheets of newspaper between the two old hives.

By this plan one would have three colonies instead of 4, but the main thing would be that he would get lots of honey from this united colony, as it would be plenty strong enough to take hold of a flow, when if you had the two old colonies separated you would have no honey stored for some time.

We have tried this plan twice so far this year, and it has succeeded very well, so we are going to try it still further.

When brood is hatched in the upper story we use the combs to hive swarms on.

Now when these united colonies get strong, and want to swarm, we will be no worse off than before, for we can keep doubling up.

LOUISIANA.

ANSWER.—Your plan of doubling brood is good. In some places there would be danger that colonies would swarm again if hived on as much as 3 frames of brood. If they don't with you it's all right, for the more brood a swarm can have the better, provided it doesn't swarm.

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Reports and Experiences

Bees Wintered Well

Bees in the cellar are perfectly quiet. They had no midwinter flight.

F. Greiner.

Ontario Co., N. Y., March 22.

Heavy Rains and Washouts

The rain is pouring down, and has been doing so almost constantly for a week. There have been a good many washouts. We are expecting a good season, but I think bees will be scarce, as I have seen many apiaries where they are all gone. J. Holt.

Los Angeles Co., Calif., March 16.

Do Bees Freeze or Starve?

I think I have demonstrated, the present winter, that bees do not freeze to death. I had one colony in a Danzenbaker hive, very light, probably containing less than a pint of bees, and not expecting them to winter, I did not pack them on the summer stand. But disliking to see anything starve I gave them a well-filled frame of honey, from a strong colony. And they appear to have wintered as well as strong colonies well packed for wintering on summer stands. So I conclude that if this little bunch of bees could survive the zero weather we have had this winter, they do not freeze.

This agrees with the experience I had over 50 years ago, when I wintered bees under a shed facing east, without any further protec-

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tion, and scarcely ever lost a colony from any cause.

I remember among my first colonies was one with the date 1847 cut in the hive, and a few years subsequent to this date, I built an ell on the north end of the bee-shed, 4x6 feet, fully enclosed. In order to prevent swarming, I put four colonies in this little room, and they developed into strong colonies, and utilized the room outside their hives, to such an extent that I took out combs well filled, over 3 feet in length.

My bees seem to be all right so far, 20 colonies in number, from 3 three years ago, but I lost several a year ago this winter. They did poorly last season. JESSE GREEN.

La Salle Co., Ill., March 10.

Is Bee-Paralysis Hereditary?

If I am not mistaken Nels Christensen condems my article on bee-paralysis. Isn't it a fair indication that bee-paralysis is a hereditary disease when a queen's progeny has it and all of her daughter's progeny are also affected with it?

I had many other colonies in the yard at the same time, and not one of those were affected.

Now, do not get an idea that I think I know all about the disease, for I do not think so. If any one has had any experience with the

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OTISVILLE, PA., Jan. 18, 1904.

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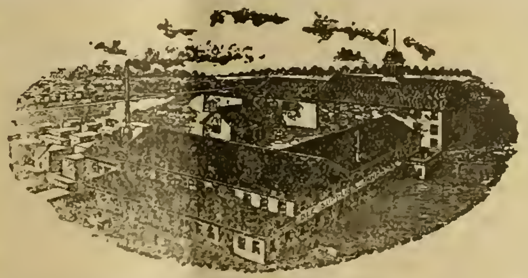

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real bee-paralysis, I would like to hear it, but I do not want some one to come in saying he doesn't know anything about the disease, and at the same time condemn an article on it. In fact, I don't see how he can, when he doesn't know anything about it himself.

FRANK STOFLET.

Wood Co., Wis., March 3.

Making Nuclei Under Difficulties

Last season I lost some bees in making nuclei. I made about 6 of them one day, giving each about 2 frames of brood and 1 frame of honey. I stuffed the entrance with grass and left them for 2 days. When I came

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When Queens are wanted with Nuclei add price of any Queen wanted. We guarantee safe arrival of all Queens and Nuclei. Our breeders may be returned after 30 days, if satisfaction is not given. Cash must come with all orders. Orders are booked and filled in rotation. We book orders for next season. Safe arrival guaranteed of all stock. We ask a trial order.

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We wish to say that we are now loaded with a big stock of Fine Bees and Queens ready to mail now; no delay; send for what you need at once.
We breed the 3 and 5 banded Italians, Cyprians, Carniolans, Holy Lands, and Albinos, in their purity, in separate yards from 5 to 30 miles apart.
Tested queens, $1.25 each; Breeders, $3 to $5 each. Untested, from either race, 75 cts.; 6 for $4, or $7.50 per dozen.
Full colonies, 1, 2 and 3 frame Nuclei cheaper than you ever bought good stock for before. No better to be had. Write for price-list FREE.
Safe arrival and perfect satisfaction guaranteed or your money returned. Prices of Queens to dealers, or in large lots on application.
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Is there any better proof than this, that we satisfy and please our customers?
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☞ J.G. Goodner, of this State, writes me that he "prefers to pay $25 for a Rietsche Press than do without it."—A. G.

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Golden Queens and Bees

Ready June 1. Hustlers for honey; very gentle, non-swarming. Price-list now ready—also an 8-page leaflet on queen-rearing, including my experience in curing pickled brood, black brood and bee-paralysis, sent free to all who apply.

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Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day

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Tested Queens by Return Mail, —$1.00 Each—

We have a large number of Choice Tested Queens, reared last September and October, and wintered in 4-frame nuclei; these queens are vigorous and prolific, and of our fine strain of Three-Band Italians. Just the queens to build up weak colonies. Try them. Send for circular.

J. W. K. SHAW & CO.
13Atf LOREAUVILLE, Iberia Par., LA.

back to look at them I found that the most of the nuclei had smothered and the frames were broken down. The thermometer was 90 degrees at the time.

But I didn't get discouraged. I gave the nuclei more bees and queen-cells, but didn't bother about stopping the entrances. In some of the nuclei the bees left to such an extent that there were not enough to start the queen to laying.

After I got the first batch of queens out I gave more cells from other colonies, and more trouble followed. None of these queens were any good, so I gave them more queen-cells in queen-cages, but only one hatched, and it died soon after.

The mistake I made was in giving queen-cells to nuclei that already had queens. However, the bees have paid for themselves, so I may do better another year.

W. GONOR.

Manitoba, Canada, March 1.

Wintering Bees

I have kept bees for five years, but with the farm and stock work I did not give them the care they ought to have had and the consequence is I lost 6 out of 8 from the severe cold; they had an abundance of stores. I did not have regular hives, just box-hives which I made. I wintered them on the summer stands but believe they are like poultry, if you want them to thrive and be ready for business when spring opens you must give them comfortable winter quarters. I am in a pretty good location, near the timber where there is plenty of early flowers; then white clover, then basswood. I think my family is healthier since we had plenty of honey to use.

DAVID HAYNES.

Queens Hatching—Piping Heard Before Swarms Issue

I have a neighbor who is a bee-keeper, and claims to be an expert. He came to my home to give me some "pointers" on bees, and

—ITALIAN—
Bees, Queens and Nuclei

Choice home-bred and imported stock. All queens reared in full colonies.

One untested queen	$1.10
One tested queen	1.65
One select tested queen	2.20
One breeding queen	3.30
One comb nucleus (no queen)	1.80

Untested ready in May; all others ready now from last season's rearing.

Safe arrival guaranteed. For prices on quantities and description of each grade of Queens, send for free price-list. **J. L. STRONG.**

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WE SELL ROOT'S GOODS IN MICHIGAN

Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.

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part of the time was taken in showing me how to start a nucleus with 2 brood-frames, a queen-cell and bees. He explained that the queen would hatch out 3 days after the cell was sealed. That was more than I could stand, so I went for him. But he stuck to it, and would not give in. I think he was somewhat mixed.

In the issue of Feb. 9 we read, "When you put your ear to the hive the evening before a second swarm issued, did you hear more than one queen piping?" I have heard queens piping time and again, and have always heard 2. The morning before the swarm issued I have opened the hive, and found 2 queens, one in each side of the hive. Later in the day a swarm would issue, and there would be a queen in the cluster, and one in the hive. Sometimes I would find one or two running in front of the hive on the ground.

NELS CHRISTENSEN.

Crow Wing Co., Minn., March 9.

Very Severe Winter

The past winter was very severe in Wisconsin, much more so than the previous one. Colonies went into winter quarters strong in bees and honey, as we had the best honey flow in years last fall.

We started the season with 188 colonies. About 20 were very light, and did but little except build up. We took off 14,000 pounds, mostly extracted, about one ton of which was fall honey (amber). We were greatly troubled, early and late, with honey-dew. The bees got some of it in the brood-chambers, and went into winter quarters with it, and it is causing us a little trouble.

Bees that wintered outdoors had a good flight Dec. 24. After that for 2 solid months the thermometer was below 34 degrees above zero—6 days it was at zero, 12 days 8 below, 4 days 10 below, 5 days 2 below, 5 days 28 below, 2 days 34 below, and the rest of the time from Dec. 24 to Feb. 25 it ranged from zero to 34 above.

We have had over 3 feet of snow in the woods at one time. It is over half gone now. We all think the clover is all right at present, and know that the ground is full of water to the depth of 6 feet.

L. G. BLAIR.

Grant Co., Wis., March 13.

QUEENS ITALIAN QUEENS
BY RETURN MAIL.
Try Taylor's 3 banded leather-colored and 5-banded Golden Queens—the best honey-gatherers in America. Untested, 75c each, or $8 per dozen; tested, $1, or $10 per dozen; select tested, $1.50 each; breeders, the best, $3 each. I have been breeding queens for 17 years, and I know what a good queen is. No small queens sent out. I guarantee safe delivery. Send your orders to J. W. TAYLOR, Ozan, Ark.
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We handle the best makes of Dovetailed Hives, one-piece Sections, Comb Foundation, and all other articles needed in the apiary, at lowest living prices. Bees and Queens for sale in season. A. W. SWAN & CO., Centralia, Kan.
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Gauges 18 different shapes of starters. Easy to cut 100 starters per minute. Illustrated circular free. J. E. ENYART & SON,
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JAMESTOWN, N. Y.

CONVENTION NOTICE.

New York.—The annual spring meeting of the Fulton and Montgomery Counties Bee-Keepers' Society will be held in Amsterdam, N. Y., at the Central Hotel, on Tuesday, May 2, 1905, at 10 o'clock a.m. All are invited.

West Galway. N. Y. T. I. Dugdale, Sec.

Many Claim Jerseys Superior

to every other milking and butter-making breed. Why? It will be thoroughly argued and questions answered in Blooded Stock for April. Mr. S. E. Nivin, Landenburg, Pa., and C. I. Hood, Lowell, Mass., are of international reputation and head the list of contributors.

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will devote nearly every column in April to this fascinating subject. It will teach its readers how to handle Jerseys to get highest percentages of cream and milk. You must subscribe! 25c a year.

May Blooded Stock will be given over to Poland-China Swine. Send for free sample copy and handsome booklet. Do it now.
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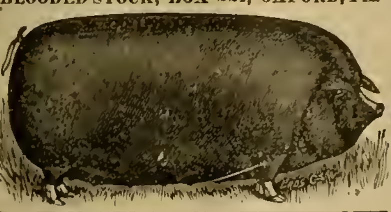

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Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

Honey and Beeswax

Chicago, April 7.—The market has cleaned up quite well on comb honey. Choice white comb is selling at 12@13c, and the off grades are also moving freely at 9@10c. Extracted is not sharing in this movement and prices are weak at 6@7c for white and 5@6c for dark according to flavor, body and package. Beeswax, 29@30c. R. A. Burnett & Co.

Boston, March 9.—The demand for comb honey still continues light with heavy stocks on hand. Fancy white, 15@16c; No. 1, 14c. Extracted, 6@8c, according to quality. Blake, Scott & Lee.

Kansas City, March 31.—The honey situation does not improve. While there is a little better movement the prices seem to be lower. Fancy white brings $2 a case; No. 1, $1.75; amber and lower grades from $1.25 to $1.50. Extracted, 4½@6c. Beeswax, 28c. C. C. Clemons & Co.

Cincinnati, O., April 7.—The large stock of comb honey, yet offered with hardly any demand, caused lower prices. I quote fancy water white at 12c; other grades in proportion, lower. Extracted is in the usual demand for this time of the year; quote amber in barrels at 5¼@5½c; in cans, ½c more; white clover, from 7@8c. Beeswax, 28c. C. H. W. Weber.

Albany, N.Y., Feb. 8.—Honey market dull this extreme cold weather, especially comb, which candies or granulates and cracks easily. We quote: Fancy white, 13@14c; No. 1, 12@13c; mixed, 10@11c; buckwheat, 10@11c. Extracted, better demand: Buckwheat, 6@6½c; white, 6@6½c. Buckwheat most in demand, as the Jewish people will have no other. Beeswax, 30@32c. H. R. Wright.

Philadelphia, April 10.—The market is still further demoralized on comb honey since our last quotations. Good comb honey is being retailed for two for 25c and wholesaled at 10c a section. This will grade from fancy down, and is bought up in job lots to close out. We have no further quotations, as the market is very irregular. Extracted honey is selling, fancy white at 7c; amber, 5½@6c, according to quality.

We are producers of honey and do not handle on commission. Wm. A. Selser.

New York, April 8.—There is nothing doing in comb honey. The demand is next to nothing. Quite an amount of old stock left on hand, some of which no doubt will not be sold before fall. A little fancy stock is moving here and there but of no consequence. Large blocks are not being moved. Extracted honey is dull also. Large buyers are holding off having an idea that prices will rule considerably lower when the new crop begins to come in from the South and California. For the present time we cannot encourage shipments of either comb or extracted honey. Beeswax is firm and in good demand at 30c. Hildreth & Segelken.

Cincinnati, March 10—There is little, if any, improvement in the honey market here, since our last quotation. We hope to render a more encouraging report soon. We quote amber extracted honey in barrels and cans at 5½@6½c. White clover at 7@8c. Fancy white comb at 12@13c. Beeswax, 28c. The Fred W. Muth Co.

San Francisco, April 5.—White comb, 1-lb. sections, 11@12 cents; amber, 8@10c. Extracted, white, 6@6½ cents; light amber, 4½@5½c; amber, 3¾@4¼c; dark amber, 3@3½c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

New crop honey is expected on the market in the near future. Indications are there will be a fairly liberal yield in this State and the quality of high average. No large quantities of 1904 honey now on market, but inquiry for same is light and business is mostly of a small jobbing character.

QUEENS! QUEENS!

Am ready as usual to furnish the BEST OF QUEENS only. Have changed my address, having moved to 1111 N. Smith St., San Antonio, Tex., where I have better mail service.

Untested Queens, 85c each; Tested, $1.25 each. Untested, after April, 75c each; or $8 per dozen; Tested, $1 each.

I rear only the three and the five banded Italians. DANIEL WURTH,
1111 N. Smith St., SAN ANTONIO, TEX.

☞ Please order from these prices to save correspondence. 14E2t

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3-Frame Nuclei For Sale.

We can furnish 3-frame Nuclei of Italian Bees with Queen, by May 10, or thereafter, at $3 each, f.o.b. express office 100 miles west of Chicago. Tested Queens now, at $1.25 each. Address,

GEORGE W. YORK & CO.
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LEWIS' SECTIONS

You are not taking chances when you order Lewis' Sections.
Our name is on every crate.

These are Lewis' Sections. Aren't they Beauties?
Read what others say about them :

G. B. Lewis Co., Watertown, Wis. Deerfield, Iowa.

Gentlemen :—I want to say that I consider your make of sections the nearest perfect of any I have ever had. I have folded packages of 500 without breaking one and I cannot say that of others I have used.

Yours truly, Geo. Brown.

G. B. Lewis Co., Watertown, Wis. Centralia, Kas.

Gentlemen :—Everybody wants Lewis' sections.

Yours truly, A. W. Swan.

Grand View, Iowa, June 3, 1904.

G. B. Lewis Co., Watertown, Wis.

Gentlemen :—I have received those sections in good shape and I am well pleased with same. They are all right in every way. I shall recommend your bee-supplies to other bee-keepers. I think you make better goods than any other firm in the world. Accept my thanks.

Yours truly, Geo. B. McDaniels.

Kenton, Ohio, May 4, 1904.

G. B. Lewis Co., Watertown, Wis.

Gentlemen :—The goods are simply fine in every respect. We have compared a few of the No. 1 sections bought of another firm which we carried over from last season with your No. 2 and find that the No. 2 are superior.

Yours truly, Norris & Anspach.

Lewis' Sections have made the Lewis Co. famous. They are for sale all over the world.
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American Bee Journal

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45th Year. CHICAGO, ILL., APRIL 27, 1905. No. 17.

WEEKLY

APIARY OF EDW. SCOGGIN, OF EDDY CO., NEW MEX.
(See page 308.)

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Or Prospective Bee-Keeper

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We are certain that any one interested in bees would be greatly benefited by becoming a subscriber to GLEANINGS IN BEE CULTURE. We want you to give it a trial. After you have received a few numbers we are sure you will become a permanent subscriber. We therefore make a special trial offer of 6 months for 25c. Fill in your name in space below, remit 25 cents, and the paper will begin at once.

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Enclosed find 25 cents, for which send me Gleanings in Bee Culture 6 months.

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Root's Goods in Chicago.

For the saving of freight for our western trade, as well as to give much quicker delivery, we opened a branch office in Chicago, Oct. 1, 1903. The following taken from our catalog of last year, explains the transfer then made:

> The business for many years conducted by George W. York & Co., at 144 E. Erie Street, as agent for The A. I. Root Company's supplies, is this day transferred to The A. I. Root Company, to be conducted as a branch office. Please note change of name to avoid confusion in our work. THE A. I. ROOT CO.
> October 1, 1903.
>
> *To Our Customers and Friends:*
>
> In transferring back to The A. I. Root Company the bee-supply business, which we took over from them some years ago, we do so with regret, as we have labored hard to build up a large and honorable trade in bee-appliances, and value beyond expression the valuable patronage accorded us during the years. We trust the same will be continued to our successors in the business.
> GEORGE W. YORK & CO.
> Chicago, Ill., Oct. 1, 1903.

The conveniences offered by the branch office were evidently appreciated by the bee-keepers of Illinois, Wisconsin, and other States beyond, for the business done by the branch was much beyond our expectations. During the rush season—April, May and June—orders came in so fast that, in spite of frequent orders to the factory for another car of goods, the stock ran low, and some delays and annoyances thereby were caused. Some little confusion because of change of name and manner of conducting the business (from agency to branch office), but these have all been overcome. We are better than ever prepared to handle your business carefully and promptly, and solicit your patronage.

Low Freight and Quick Delivery.

A glance at any railroad map will show the superiority of Chicago as a shipping-point. Because of the great number of railroad and steamboat lines centering in Chicago, and the large stock of goods we carry, we can give you the best of service. This office is in constant touch with the factory and home office, and in many cases can give your order quicker attention and earlier shipment than the factory, to say nothing about the saving in time and transit and lower transportation charges.

Wholesale and Retail.

We are prepared to furnish goods at wholesale and retail, the same as the home office.

Terms.

Our terms are cash with the order. We pay cash for material, and pay our helpers cash every week for their work; therefore we must have cash in advance for the goods furnished. Do not ask for credit.

Beeswax Wanted.

We are in the market for good beeswax the entire year, and pay the same prices as quoted by our home office in each issue of GLEANINGS IN BEE CULTURE. Send your wax direct to us for cash or in exchange for supplies.

Extracted Honey.

In the course of a year we use large quantities of extracted honey, and are pleased to get sample and prices from parties who have honey to exchange for supplies. We are also prepared at all times to furnish first-class honey to any one who is in need of same, either bee-keepers who have a demand for more than they can furnish, or from dealers. Get our prices before you place your orders elsewhere.

DANZENBAKER HIVE.

"Facts About Bees", a 64-page book written by Mr. F. Danzenbaker, giving a complete description of his famous hive and directions for using. Full of valuable information. Sent on receipt of a 2-cent stamp to pay the postage. **Send for it.**

The Danzenbaker Hive

THE COMB-HONEY HIVE.
Three Points of Excellence:

QUALITY
You can produce better-looking honey.

QUANTITY
You can produce more of it.

PRICE
You can get more per pound for it.

THE A. I. ROOT CO.

SPECIAL NOTICE.

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GEORGE W. YORK, Editor. CHICAGO, ILL., APRIL 27, 1905. Vol. XLV.—No. 17.

Editorial Notes and Comments

Putting Weak Colonies Over Strong Ones

Reference to page 262, shows considerable interest at the Michigan State convention in the plan of putting weak colonies over strong ones in spring. The plan was first given by E. W. Alexander, in the Bee-Keepers' Review for April, 1904, where he says:

> After the bees have been taken from the cellar, and had a good flight, we commence at one side of the yard and examine every colony carefully. Those that are weak in bees, yet have a good queen, we mark; and, as soon as they have some larvæ in their combs, which is usually in about 5 days after setting out, each is taken to a good, strong colony and set on top, with a queen-excluding honey-board between. If there is no larvæ at this time in the weak colony, I give it a frame from the strong colony, so as to keep the bees from leaving their queen, and all going below. I close up all entrances except that of the strong colony. The bees will divide themselves about equally between the 2 queens; and in about 4 or 5 weeks I can separate them, and, in nine times out of ten, I have 2 good, strong colonies. For 20 years I have treated all of my weak colonies in this way in early spring. Sometimes I have had 100 weak colonies on top of strong colonies, and I don't lose 5 percent. I think it a much better way than to try to build them up alone; as there is no trouble from robbers, and no attention is required until it is time to separate them. Don't keep them together too long, as the young bees, when over 2 weeks old, are liable to sting one of the queens.

Commenting upon this in the latest number of the Review, Editor Hutchinson says:

> When I published the foregoing there was no doubt in my mind that it would work out as Mr. Alexander said it would, that the weak colonies would be saved and build up, but I had a lingering suspicion that the strong colonies might lose as much as the weak ones gained—that it was robbing Peter to pay Paul—and I don't feel sure yet that there is anything gained except saving the queens of the weak colonies; however, I am more than willing to be convinced to the contrary.

There can be no question that any accession of bees to the upper colony from below means a loss to the lower colony. Another thing not mentioned is the fact that the upper colony will lose its flying force not once, but twice. When it is placed over the strong colony, any bees that have well marked the old place, when they return from the fields, after the removal, will go straight to the old location and join some colony close by. The number will not be large when the removal occurs as early as Mr. Alexander mentions; but in the cases mentioned on page 262, the removal was no doubt much later, for Mr. Pearce says in the last Review that he got his hint from the April (1904) Review, and the others probably did the same.

When the upper colony is returned to its old stand after 4 or 5 weeks, the loss of the entire field-force will be a somewhat serious matter.

After looking all these objections squarely in the face, there still remains one great advantage, an advantage so great that if the loss of queens is no greater than reported, a debt of gratitude is due Mr. Alexander for giving us the plan. Compare 2 colonies in the spring, one with bees enough to cover 2 frames of brood and another twice as strong. The weaker colony will stand still as to strength, if indeed it does not progress backward, while the other will increase right along. That is, the proportionate increase is very much greater with the stronger colony. Later in the season, when the weather is warm, the weaker colony will increase with the same proportion as the stronger. Now if we can, after a fashion, unite the forces in the cool, spring weather, there will be great gain. We have practically given the upper colony warmer weather, in which it can have a fair show.

The editor of the Review says "it is really, in one sense, a division of the strong colony, a drawing off of bees and heat for the building up of another colony." The drawing off of heat is admitted; but not so much heat is withdrawn as if no bees were in the upper story. Just a bit doubtful as to drawing off bees. No bees are likely to go above that are needed to cover the brood below, and the bees above can keep warm a much larger amount of brood in the now warmer atmosphere.

On the whole, there seems good reason to believe—always supposing no loss of queens—that the advantage to the upper colony will largely overbalance the harm to the lower. The loss of the field-force, when the upper colony is returned to its old stand, will be just so much gain to the lower colony, and if desired things may be evened up by giving the upper colony one or more frames of brood from below a day or two before the time of the second removal.

It is not too late yet to make a trial of the plan in the North, and let us hope that others will succeed so well that a vote of thanks may be given the Review for blazing the way.

Sugar Syrup Not All Inverted

Analysis reported in the British Bee Journal showed 3.8 percent of sucrose (cane-sugar) where sugar syrup had been fed, against mere traces in honey obtained from the nectar of flowers. This, the British Bee Journal says, is in accord with the statement of Mr. Cowan at a California convention, where he said:

> "When bees have been fed with cane-sugar syrup only part of this is transformed into dextrose and levulose, so that it is easy to detect the presence of cane-sugar in the way I have pointed out before, when this method of fraud has been adopted."

Missouri's Unfortunate Foul Brood Bill

Mr. Robt. A. Holekamp, who was perhaps the most active bee-keeper in all Missouri in getting the Apiary Bill passed by the Legislature of that State, wrote the following letter to Gov. Folk, who had vetoed the Bill:

St. Louis, Mo., March 23, 1905.

To His Excellency, Joseph W. Folk,
Governor of the State of Missouri.

Dear Sir:—I have just read in the St. Louis Republic your message to the Secretary of State vetoing Senate Bill No. 268, the Apiary Bill.

I take the liberty to send you these lines explaining why this Bill was introduced and passed by both houses of our Legislature.

We have diseases amongst the bees of this State which can not be eradicated through the efforts of the individual bee-keepers, because the infection is constantly carried back to his apiary if other apiaries in his vicinity are diseased.

The disease which has a strong foothold in this State is foul brood, which is caused by a microbe called Bacillus alvei; this Bacillus kills the larvæ in the brood-combs before they mature into bees, and colonies infected with this disease become weak and finally die out. When a colony is in this weak state, or has died out, bees from other colonies enter the hive, rob the honey left in it and carry it into their own hives. The colony to which this honey, which contains the Bacillus alvei, is carried soon shows the disease and will perish as the colony from which the honey was carried, and in this way whole apiaries are destroyed.

Now, if it were only for the bee-keeper's own apiary where foul brood exists, it would probably not be necessary for the State to interfere, but bees from neighboring apiaries will come to this diseased apiary and carry home the disease by robbing in the diseased apiary, thus spreading the disease and destruction.

Bees will travel as far as 6 miles in quest of honey, and it seems they have means, as experience teaches, to find a weak colony or a hive without live bees on long distances.

The State Inspector is needed to examine bees, which the progressive bee-keeper has no authority to inspect. There is no possibility for the Missouri State Bee-Keepers' Association, or the individual bee-keeper to preserve the bee-industry of the State from final destruction; the State must help them.

The disease exists now only in spots here and there over the State, and it can be eradicated if proper measures are taken in time.

The honey industry of Missouri is not small. There are over 41,000 bee-keepers in this State, according to the United States census of 1900, who produced in 1903 over 6,000,000 pounds of honey, according to the reports of the Missouri State Board of Agriculture.

If you will permit me to appear before you to show some combs containing the larvæ killed through foul brood, I will be pleased to come to Jefferson City, and then will be able to explain more fully the workings of the disease, and be able to back it up by proper literature.

The Apiary Bill is killed for the present by your veto, but it will be introduced again in the next Legislature, and that is the reason I take the liberty of addressing you.

I also take the liberty of enclosing a copy of a letter sent by Prof. Frank Benton, of the Department of Agriculture, Washington, D. C., to Senator Voorhees, which shows that Prof. Benton considers legislation necessary for the preservation of the honey industry of this State.

I wish to remark that I have not been a candidate for Inspector, and this Bill had not been gotten up to give a job to some individual. I send you enclosed a circular to the members of the Missouri State Bee-Keepers' Association, which was sent out by me before I read your veto in to-day's paper. There were two candidates for Inspector already, but I was trying to find the best man available, and then to submit his name as the candidate of the Missouri State Bee-Keepers' Association to the Missouri State Board of Agriculture, and to petition the Board to appoint him. Mr. George B. Ellis, Secretary of the State Board of Agriculture, will bear me out in this.

Respectfully, ROBT. A. HOLEKAMP,
Assistant Secretary Missouri State Bee-Keepers' Association.

The letter referred to as written by Mr. Benton to Senator Voorhees, is as follows:

WASHINGTON, D. C., Feb. 16, 1905.

SENATOR VOORHEES, State Senate, Columbia, Mo.

Dear Sir:—One of the correspondents of this office has called my attention to Senate Bill No. 268, which is entitled "An Act to provide for the appointment of a State Inspector of Apiaries, and to regulate the duties thereof."

During several visits that I have made to your State, I have seen the necessity for some such legislation, having learned of considerable devastation in different portions of the State through contagious diseases of an extremely destructive character, and I am therefore greatly interested in the success of such legislation.

The only change which I would suggest is to make it slightly more general, through using in the first section of the Bill the words, "for the prevention and suppression of contagious diseases among honey-bees, such as foul brood, black brood, paralysis," etc., instead of the sentence, which, in the present Bill, confines it more especially to one disease alone. The possibility should always be taken into consideration of the introduction of other diseases, as well as the fact that at least one other disease besides foul brood, namely, paralysis, does exist within the State at the present time.

The great benefit which honey-bees do to the horticultural and agricultural interests of the State, through complete pollenation of the blossoms of fruit-trees and various clover and seed crops, resulting in greater production as well as better quality of fruits and seeds, renders the protection of bees of great importance to the horticultural and agricultural interests of the State.

The States of New York, Michigan, Ohio, Wisconsin, Illinois, Colorado, Texas, Utah and California have laws which, in most instances, have been of great benefit in the suppression of contagious diseases among bees. Perhaps among these the Illinois law has been most ineffective, simply through lack of proper compensation to the Inspector, and perhaps, in some instances, no appropriation to execute the law properly. On the other hand, in New York, Colorado, Wisconsin and California vast good has resulted, while no interests have been injured thereby.

I commend most heartily to the careful consideration of every Senator this subject, and hope sincerely that the pending legislation will receive unanimous support.

Yours very respectfully, FRANK BENTON,
In Charge of Apiculture.

In the Modern Farmer and Busy Bee for April, Editor Abbott devotes several pages to a thorough review of Gov. Folk's veto, which appears on page 261 of this Journal. Mr. Holekamp did well to write to Gov. Folk. The only fear is that he may never see the letter among so large a correspondence as a governor would naturally receive Of course it was too late to undo the wrong done the bee-keepers of Missouri. They will have to try again at the next session of their Legislature, and in the meantime endeavor to see to it that the Governor is so well informed on the subject that he will not repeat his unwise action.

On another page appears an article on this subject, from Dr. G. Bohrer, of Kansas.

Miscellaneous News ✣ Items

Hon. R. L. Taylor, of Michigan, has been elected chairman of the Board of Directors of the National Bee-Keepers' Association, to succeed W. F. Marks, of New York, who resigned.

* * *

Photographs of Apiaries.—We could use some more good photographs of apiaries of our subscribers if they will kindly send them in. We should also like brief descriptions to accompany them. In case we would not be able to use any that are received, we will return them if so requested. We will also return any we do use if it is desired. If you have a nice apiary, and no picture of it, why not have one taken during the summer when it appears at its best?

* * *

The Apiary of Edw. Scoggin, of Eddy Co., New Mex., is pictured on the first page this week. Mr. Scoggin has this to say about it:

I send a photograph of my apiary and a portion of my dwelling-house and family, taken in 1902. My family consisted of myself, wife, four boys and one girl. My apiary contained 120 colonies, and produced 5¾ tons of honey that season—3000 pounds of comb honey and the balance extracted.

I commenced keeping bees in the fall of 1894, with 10 colonies. The next season I sold honey to the value of over $14 to the colony, and increased by dividing to 41 colonies. I commenced using dovetailed hives with full sheets of foundation, and still use full sheets, and right here is where I think my success lies.

I have 160 colonies in hives well painted, with frames wired and full sheets of foundation in every frame. EDW. SCOGGIN.

* * *

"Drove of Wild Bees Swimming."—Mr. J. M. Burtch, of Whiteside Co., Ill., sends us the following somewhat flowery quotation from a recent novel, which will be quite amusing to bee-keepers:

"The king sat in his private garden in the shade of a potted orange-tree, the leaves of which were splashed with brilliant yellow. The velvet hush of the midday hour had fallen. There was an endless horizon of turquois blue, a zenith pellucid as glass. The trees stood motionless; not a shadow stirred, save that which was cast by the tremulous wings of a black-and-purple butterfly, which. near to his majesty, fell, rose and sank again. From a drove of wild bees swimming hither and thither in quest of the final sweets of the year, came a low, murmurous hum, such as a man sometimes fancies he hears while standing alone in the vast auditorium of a cathedral."

Surely, a "drove of wild bees swimming" would be quite a "novel" sight—seen only in a novel.

* * *

Geo. W. Brodbeck—Additional Notes.—Last week we gave a biographical sketch of Mr. Brodbeck, written by Prof. A. J. Cook. Since then we have received the following from J. M. Hambaugh, who also knew Mr. Brodbeck well:

Geo. W. Brodbeck was loved and respected by all who knew him, and he had the entire confidence of the bee-keepers of the Sunny Slope. His heart was in the work, and he labored early and late to place the apiarian interests on a higher and more lucrative plane, the last two or three years of his life, as president of the California National Honey-Producers' Association.

The bee-keepers of the Coast and Nation have lost a faithful and sincere friend, and the name of Geo. W. Brodbeck will long be remembered as one of our brightest and most distinguished lights of the industry in California. May his spirit be at rest. His wife and family have our heartfelt sympathy in this their dark hour of sorrow.

J. M. HAMBAUGH.

Mr. Hambaugh also enclosed a letter dated March 23, written by Mrs. Brodbeck, from which we take the following paragraphs:

"My husband's birthplace was Lawrenceburg, Ind. He grew to years of manhood in that town. He was married there, Dec. 3, 1878. He removed to Edinburg, Ind., where he resided about 5 years, going from there to Indianapolis. In that city he became interested in bees, and owned a small apiary. In October, 1889, he came to Los Angeles, where he resided until the time of his death.

"In January, 1904, he had a severe attack of pneumonia, and for days it was thought he could not live. He rallied from that somewhat, but never gained much strength. The effects left by that terrible disease were such that he could not recover, and he gradually grew weaker until death ended his sufferings, Feb. 6, 1905.

"He was an earnest Christian, and was entirely willing to go, but would have preferred to get well for my sake. His love for the bees and the welfare of the bee-keepers is well known. He loved the work he had chosen with unselfish devotion."

* * *

The Farm Journal has in its May issue, in a very prominent place, an excellent article written by Mr. Wm. A. Selser, one of the members of The Honey-Producers' League, on "The Honey-Bee and the Truth About Honey." Mr. Selser sets forth some real facts about honey and its nectar origin.

Also, in the same issue, appears this paragraph, in the department called "Heart Problems," conducted by "Aunt Harriet," who, in the April Farm Journal, wrote the statement about honey that we copied on page 291:

> I have had a number of letters in reference to an item which appeared last month, advising me that my statement in regard to adulterated honey was overdrawn, and is liable to injure the bee-industry. The attention of the Editor of the Farm Journal has also been called to the matter, and he wishes me to say that bee-keepers need not fear but that the Farm Journal will set the matter right if a mistake has been made.

The Chick Book.—The successful methods of rearing chicks; 80 pages 9x12 inches. A book of thorough and reliable instruction on rearing chicks. It includes chapters on condition of the breeding stock; selecting and incubating the eggs; brooding, feeding and caring for the chicks from the time they are hatched until they are ready for market or breeding pen. By following the instructions in this book, the poultryman can avoid mistakes and secure the greatest profit, whether raising chicks for market or fancy. If your chicks do not live and thrive, consult this book, and learn better methods. It is a guide to success. Price, 50 cents, postpaid, or given free as a premium to a paid-in-advance subscriber who sends us one new yearly subscription to the American Bee Journal with $1.00; or clubbed with the Bee Journal one year—both for $1.30. Address the American Bee Journal office.

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Honey as a Health-Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food", written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey". It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey the more honey they will buy.

PRICES, prepaid—Sample copy for a two-cent stamp; 50 copies for 70 cts.; 100 for $1.25: 250 for $2.25; 500 for $4.00; or 1000 for $7.50. Your business card printed *free* at the bottom of the front page on all orders for 100 or more copies. Send all orders to the office of the American Bee Journal.

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"**The Hum of the Bees** in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

◆

Some Facts About Honey and Bees.—This is the subject of an article written by Mr. J. E. Johnson, and published on pages 581–82 of the American Bee Journal for Aug. 25, 1904. We have republished it in 4-page leaflet form for general distribution, and furnish it, postpaid, at 35 cents per 100 copies. Send all orders to the office of the American Bee Journal

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Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get them subscriptions, for which work we offer valuable premiums in nearly every number of this Journal. You can aid much by sending in the names and addresses when writing us on other matters.

Contributed Special Articles

Producing Section Honey With and Without Separators

BY WM. M. WHITNEY

On pages 20 and 21 there appear some expert opinions respecting the production of section honey. To the question "Can marketable sections of honey be satisfactorily produced without separators?" a large number of emphatic "Noes" were the response. Other, and more guarded replies, admitted the possibility of its being done.

It is seldom that we find two bee-keepers surrounded by the same conditions and having exactly the same difficulties to meet and overcome, and this fact, it seems to me, may be one of the prime causes of the diversity of opinion among bee-keepers on nearly every branch of the business. My bee-keeping has been carried on, on comparatively a small scale—25 to 50 colonies being the limit—and having plenty of time to devote to details, I have given more attention to experimenting in a general way than I otherwise might have done had there been a larger number of colonies to look after; yet I believe I could have managed as many as 100 colonies just as well.

It is not the farm of the largest number of acres that is farmed the best; nor is it the largest apiaries that show the best results in every respect.

Having made a trial of wood separators, and having been troubled so much with brace-comb, which invariably, with me, spoiled the section, that only in exceptional cases has it seemed advisable to use them. Were unfinished sections, or those from which the honey had been thrown out; or, sections 1⅞ to 2 inches wide to be used, on even my style of hive, separators should be used. It is unnecessary to explain, even to an ordinary bee-keeper, why they should be used in the first two cases mentioned, but perhaps it's well to give a reason why they should be used in the last. All sections 1⅞ to 2 inches wide, if well filled, without the use of separators, weigh more than a pound. If separators are used, there results two bee-way spaces between the combs instead of one; consequently, lessens the thickness and weight of the sections just that much, bringing them within the weight required by nearly all dealers; but with 7-to-the-foot sections, if properly manipulated, the same results are attained without separators.

Allow me to explain my practice, and pardon minute details in doing so, for, often, mistakes are made, and disappointments and disasters follow, because of lack of attention to seemingly unimportant details in management.

My hives are 2-story, double-walled to the top of first story, with thin outside shell for second story. Section cases may be tiered up three high under the cover, having a dead-air space around the entire outside of the cases. The outside sections are kept, practically, at the same temperature as those in the center of the case. In early spring, the hive-stands are leveled as accurately as possible, and on all hives where the colonies are strong enough to bear the treatment, supers of brood frames of comb, or foundation, are put. Just about fruit-bloom time, or a little later, depending upon the weather and honey-flow, the colonies are examined; supers on all such as are strong in numbers are removed; bees shaken from the frames in front of the hive, and supers taken, if containing brood, to such colonies as may be comparatively weak—such may be found in nearly all apiaries having a number of colonies;—if none such are found, new colonies may be formed in the usual way.

Cases containing 7-to-the-foot, 2-bee-way 4¼ sections with full sheets of extra-thin foundation are put on all hives strong in bees; sometimes two cases, if the colony is very strong, are put on at once, and within two hours—sometimes, in much less time—the cases will be filled with bees from side to side, with not a vacant section to be found. With the dead-air space around the cases, the outside sections are worked as freely as others, and the combs are carried down parallel, with a single bee-way space between them, and as true as the best worker-comb one ever saw. Not infrequently the cases are surrounded with bees clinging to the sides nearly an inch thick. This condition could not obtain were it not for the outside wall.

Now, my theory is, that owing to the great fluctuation of temperature, often between midday and midnight, in our northern localities, the double-wall hive is a better one for the production of comb honey than the single wall, for the reason, as I have thought, that comb-building is carried on more extensively at night, bees in the outside sections in the single-wall hive, are checked in their operations during chilly nights; hence, the necessity for the use of separators in such hives to prevent the bulging of the comb in the sections. In more southern localities this condition may not prevail, but in northern localities there seems to be this trouble; or, is it my imagination? It seems to me, that if outside sections are kept as warm as inside ones, and the hive is strong in bees, that work would be as likely to be done there as elsewhere. While I've never had anything but limited experience with single-walled hives, this theory seems plausible to say the least.

But, I imagine I hear some one saying, "This is all a pretty word-picture; it looks well on paper; sounds musical, but I'd like to know whether it is all so, or not." Well, try it. Some one says, "It's just possible you are not a judge of what constitutes a marketable section of honey." Well, I'll not say as to that, but let the honey speak for itself. A dealer who handles it in one of our large cities reports that he has handled honey in the same place for 16 years, and that this honey—non-separatored honey—is the finest that he ever saw; that he sent a case to a lady who wanted a choice article, and that she sent it back because she thought it was manufactured; said she never saw comb so true and so nice in her life, and that she knew that it was never in a bee-hive. After being convinced that it was all right, she requested the grocer to return the honey to her home.

My honey has been shipped to St. Louis, Kansas City, Chicago, Oak Park, and to other places, at $3.75 to $4.00 per case of 24 sections (f. o. b.), and I'm unable to supply the demand. Of course, it is put up just as nicely as I know how to do it, and I intend that no section back of the front row shall suffer from a comparison with any one of those just behind the glass.

Now, whether it takes an expert or not, to produce that kind of honey without separators, I'll not admit that I cannot do it. Taking the extra expense of separators, the trouble of cleaning them, and the brace-comb that is so often built that spoils the section, I'm not so certain that I cannot do it as well without separators, and with as little trouble, as with them.

I have said that I'm experimenting a little in a general way. What we read in books and journals of course is of use to us, and sets us to thinking, which should prompt us to do a little testing of theories, so that we may know for ourselves; and, if done intelligently, this gives us positive knowledge, which is essential for every person in any line of business or employment to have. In this way, and only in this way, are we likely to advance along any line of research. I am planning to try a different style of separator from anything that I have seen, to be used with the various kinds of sections, and if I meet with success I shall give the results of my experience to my brother bee-keepers. If I fail, well—what? Why, "Try, try again." Walworth Co., Wis.

Governor Folk's Veto Message

BY DR. G. BOHRER

ON page 261 appears the Veto Message of Governor Folk, of Missouri, in which he gives what he calls his reasons for not appoving the Apiary Bill passed by the Legislature of that State.

In the second paragraph he refers to the provision in the Bill for the inspector to make a second visit to an apiary diseased, which is the only real shadow of a valid reason set forth in the entire document, that can serve as a real plea of justification in support of his inexcusable blunder.

The law should be so formed as to require the appointment of a person for inspector who is well skilled in the habits and management of honey-bees, and well-versed in the diseases of bees and the successful treatment of the same. When called upon to visit and inspect an apiary in case foul brood, pickled brood, or black brood is found, he should prescribe an effectual remedy for a radical cure. If the owner or manager of the bees refuses to permit the inspector to treat the disease or fails to apply the remedy himself, the inspector should proceed to destroy all diseased colonies, together with everything about the premises infected in a manner liable to spread the disease. As a rule, one visit will be sufficient to mark out the course to be pursued by the inspector, and he should be the judge as to whether or not more than one is necessary.

In the third, fourth, and fifth paragraphs of the Message, the Governor proves that he (like millions of other well-meaning people), knows nothing about the bee-industry, except, possibly, the superstitions and false reports sent over the country through the press, all of which have their origin in ignorance, and are cradled in superstition, to the serious detriment of a very important industry. For thousands of good people, many of whom are women and invalids, are securing a comfortable support through the scientific support of bees, and many other thousands are keeping a few colonies which supply their tables with honey, the most welcome sweet obtainable from any source.

In the fifth paragraph he states that the principle of the measure is *paternalistic*, and not in accord with the democratic theory of government, which expression had its origin in the brain of some trust magnate, and is used to prejudice the minds of the unthinking and unsuspecting, but confiding, public, and has no legitimate place in the consideration or discussion of any question like the one before us. If I am in error in taking this view of the case why should any of the states enact laws to prevent harboring and spreading glanders among horses, small-pox, yellow fever, and other ailments among the human family? The Governor has assumed ground wholly untenable, and he should lay aside all such slang expressions when considering questions which deserve the candid and sincere thought of a real statesman.

Missouri, like other States, has many intelligent bee-keepers, who are confronted with the deadly disease of foul brood among bees, which is being harbored by the careless, ignorant and superstitious persons who own them, and who are not only careless but egotistical, as well as superstitious, and unwilling to accept the advice of anyone who may be disposed to help rid them of the disease. In view of what the governor says—"leave the matter to the owners of the bees themselves"—why not, Governor Folk, call legislation against railway train-robbing *paternalistic*, and advise the railway companies, the people, and the robbers, to settle the matters of robbery among themselves?

That Governor Folk has in time past done some very good things is a fact, but in vetoing a bill for the suppression of a great source of injury to an important industry, under the tame reasons he offers, he has done wrong. Let us hope that he will not do it again.

Lyons Co., Kans.

A Large Increase—How to Secure It

BY G. M. DOOLITTLE

A LETTER lying before me reads thus: "I see that you are answering questions in the American Bee Journal, and so am led to ask you to tell me how I can increase my bees more rapidly than I did last summer by natural swarming. During the winter of 1903-04, I lost nine-tenths of my bees, and thought to get the unoccupied combs covered with bees again, by natural swarming, but as few swarms issued, I was obliged to sulphur the combs to keep them. Now can you tell me how I can increase what few I have so that I can get the combs all in use again?

I have tried many plans of rapid increase of bees, all of which would work to a greater or less extent; but I will give the one which suits me best, taking everything into consideration:

Get out as many boxes as you think you will want (I keep ten on hand), large enough to hold from three to five pounds of bees. For this purpose there is nothing better than an ordinary 20 to 24 section shipping-case, nailed up and leaving off the side-strips that hold the glass. On one of the open sides nail on a piece of wire-cloth, and for the other side, make a frame to fit, to which you will nail wire-cloth, the same as you did to the box. Now with hinges and a hook or latch, fasten this to the opposite side of the box, when you will have a door that you can open at any time you may wish.

Next get a tinsmith to make a great, big funnel, which should be eighteen inches across the top, with the usual slope of side, coming down to a 2½ inches upright, or outlet, which should be about two inches long. If this outlet is much less than 2½ inches in diameter, the bees will clog in it, instead of readily passing down through, when the bees from a frame are shaken into the funnel.

Having the funnel made, squeeze together at the top, till you have an oval funnel about a foot wide and 22 inches long, in diameter of the two ways across the top. This will collect the bees in better, when the frame is shaken, than it would if left in the ordinary funnel shape.

Next bore a hole in the top of the "nucleus box" (that is what I call this box), which will just let the small or upright part of the funnel down into it, and fix a little door of some kind to cover this hole when the bees are in and the funnel is out. Next put in a section partly filled with honey, left over from last season, putting the same near one end of the box, and fasten it in place by means of a screw, clamp or spring, so that the bees can have something to live on while in the box. This completes all the box part.

Now crowd the colonies you have in the spring, toward full colonies, just as fast as possible, using any or all the plans with which you are familiar, or those given in the bee-books, for keeping them warm, stimulating, etc.; and as soon as any one of them gets strong enough, prepare it for queen-rearing, according to the plan given in "Scientific Queen-Rearing," and continue to rear queens from this colony, as you may require, for you can do this and not hinder this colony from contributing its share of bees for the increase you wish, as well as the others, as the queen is laying all the time in it.

As soon as any of the colonies are full of bees, so they can spare bees from two frames, or from half a pound to a pound, without injuring their future prospects, and you have ripe queen-cells, take the cells out and put them into the queen-nursery to hatch. Now, as soon as the queens are one or two days old, go to any hive that can spare bees, take out two frames, being *sure* that the old queen is not on either of them, and shake the bees from them down through the funnel into the box, doing this about 10 o'clock, a. m.

Having the bees in the box, set them in some darkened room, leaving them there till the next morning, when you will get one of the young queens from the nursery, put her in a cage having a stopper in it filled with queen-candy to an extent that it will take the bees about half a day to eat it out and liberate her. Now take the box of bees to some place where it is light so you can see, and suddenly set it down on the bench or floor, when all the bees will fall to the bottom. Now quickly open the funnel hole, put in the queen-cage, and secure it so it will stay about an inch or so below the top of the box, by means of a wire shut in between the little door and the top of the box, in closing the hole again.

After having things thus fixed, set the box away again where it was before, leaving it to near sunset the following day, when you will find the bees all contented with their new queen, and hanging to the box like a swarm. At this time go to any hive that can spare a frame having some brood in it, say from ⅓ to ½ full, and take such a frame, shaking the bees off, and replacing it with a frame of empty comb. Put this frame in a hive placed where you wish a colony to stand, together with two of the combs you wish to stock with bees, each having enough honey in them to insure the little colony from starvation, placing the one having brood in it between the two having honey in them, and all near one side of the hive. Now get the box of bees, open the large door to the same, lowering it down into the hive, when with a quick, jarring motion you will shake all the bees on the bottom of the hive. At once set the box outside and draw the combs along the rabbets of the hive till they are next the side of the hive where you have shaken the bees, put in a division-board to keep them on the three combs, and keep all warm, when the bees, in running up, will be immediately on the combs, and will fly out and work just the same as a natural swarm of the same size would.

If your work is so that you can not put them in the box at 10 o'clock a. m., as given above, the little swarms can be made at any time, but by doing the work as above you will get a greater proportion of young bees in the box than you would did you do this work when the working force of bees was mostly in the hive.

As you wish to make more little colonies, fix the box back as it was when making this first one, and using the whole ten, or more if necessary, in the same way, and proceed with all the same as with the first. As the season advances you can make one such little colony from each full colony twice a week, and take the same from your colony rearing queen-cells, too.

Keep a good lookout for the combs, if the moth is likely to trouble them, using those each time that may show any signs of moth-worms, and in this way you will not need to sulphur any that were not treated that way last year, or from which the bees may have died the past winter.

When the honey harvest arrives, keep plenty of combs on the strongest colonies, so that plenty of stores can be stored in these for wintering, and, as the season advances, use more bees each time in making the colonies; and when fall arrives, if you do not have all the colonies you wish, and you have plenty of sealed combs of honey for stores left, take bees from several hives, thus forming a strong colony at once, and hive them on these frames of sealed stores. I have so formed colonies in September, many times, and had them prove as good as any the next season.

If you have some honey in the combs from which the bees died, and you work to the best advantage in securing honey in the combs when the flow is on, you can increase seven or eight colonies in the spring to 100 in the fall, easily, by this plan, without any feeding or without any outlay in cash for queens, feed, or anything of the kind; and if the season is a really good one you can secure some surplus besides.

With the nucleus-box plan, you can do almost anything you wish by way of making colonies for any purpose you may desire, and the beauty of it all is, that they will stay as contented and work as nicely as any natural swarm. Of course, it is understood that the empty combs are to be added to these little colonies as soon as the queens get to laying and they can cover more, till the hives are full, and the combs are all used.

Allow me to say that the main secret of a rapid increase, is in not commencing operations till the colonies are strong, nearly enough so to swarm, and then not robbing them of bees till they are too weak to work to the best advantage; using few bees for each colony the fore part of June, and more and more as you go along, thus having all come up to full colonies in August and September.

I have had to be brief with this in order to get all in one article, but I think I have been sufficiently explicit so the questioner, and all others, may understand. If not, I am open for more questions at any time. These nucleus-boxes have become an absolute necessity with me in my apiaries; for with them I can handle bees with about the same ease I can potatoes in the bushel boxes.

Onondaga Co., N. Y.

Our Sister Bee-Keepers

Conducted by Emma M. Wilson, Marengo, Ill.

Bees Do Not Puncture Fruit

Those who read the letter of Miss Wheeler, on page 204, will doubtless be interested in the outcome of the investigations instituted by her to find whether bees were the culprits in the case of certain injuries to apples. A letter from her dated March 1, is as follows:

Dear Miss Wilson:—As promised, I send Prof. Stewart's reply, also Prof. Parrott's comments on bees *vs.* apples. Prof. Benton's opinion, being practically the same, reads as follows:

"We have no record that I am aware of regarding puncturing of over-ripe apples by bees. My own observations do not lead me to think that bees ever do this. When apples and other fruits are broken open by any means whatever, honey-bees go in to suck the juices, and even when the skin is broken, take hold of the edges of the latter in such a manner as to permit them to enter the cavity, then to continue the sucking of the saccharine juices of the latter from the pulp."

He refers to the Annual Report of the U. S. Department of Agriculture, 1885, pages 336-339, and Gleanings in Bee Culture Feb. 1, 1901, pages 91-92, which shows where careful tests have been made both by himself and others, and also the trial in court and decisions in fruit *vs.* bees. All of which tend toward the conclusion that bees do not take the initial part in puncturing fruit, but follow after insects that do the mischief, and the bees reap the benefit.

I must, of course, bow to the decision of men so thoroughly competent to decide in this matter, and who have made a study of the subject. And of course it is quito a relief if our bees are innocent of injury to fruit. Frances E. Wheeler.

Clinton Co., N. Y.

Prof. Stewart reported as follows:

We have made a careful microscopic examination of the brown spots on the Talman sweet apple which you gave me, but have been unable to determine definitely what caused the spots. In a great majority of cases we found no traces of fungi but occasionally there was a little fungus present. Probably the spots have not been caused by fungi and I am unable satisfactorily to account for them. After talking over the matter with our entomologist, Mr. Parrott, I very much doubt that the bees could have caused this trouble. It is contrary to accepted beliefs in the matter. Mr. Parrott will, I think, write you on the subject.

F. C. STEWART, *Botanist.*

And this is the letter of Prof. Parrott:

MISS FRANCES E. WHEELER—

Dear Madam:—Upon his return, Mr. Stewart has informed me of your interesting observations upon the work of bees on apples. Similar reports have been made of the work of these insects upon grapes and other fruits. While it is thought by some that they are able to puncture fruits, it is now generally believed by apiculturists that the bees cannot gain entrance to the fruits except as the skin may be broken by other agents, as wasps and birds, etc. As we have paid very little attention to this group of insects, I have written to Prof. Benton of the Department of Agriculture, Washington, D. C., who is a specialist in this line, for his advice. His reply is sent enclosed. I am sure it will be of interest to you. When you are through with this, will you please kindly return it to me?

P. J. PARROTT, *Entomologist.*

Accompanying the foregoing documents was a private word from Miss Wheeler, asking that judgment might not be too severe upon her for having arraigned the bees for trial. Why, bless your good heart, Miss Wheeler, instead of having any grudge against you, bee-keepers owe you a vote of thanks for having done them a distinct service.

It is no light matter to have secured the verdict of two such able men as the botanist and entomologist of the New York Agricultural Experiment Station, not only because of their ability but because of their disinterested position. No matter how much more Prof. Benton may know about bees, there is some danger that having been a practical bee-keeper all his life he might be thought to have a kindly leaning toward the bees in rendering a verdict. Professors Stewart and Parrott are outside the ranks of bee-keepers, thus adding weight to their verdict, and we are indebted to Miss Wheeler that they have thus committed their weighty influence on the side of right and the bees.

I am sure that the sisters will join me in hoping that Miss Wheeler's keen eyes may be further used in watching the busy bees, and that we may often learn something from her as to that watching.

Honey as a Bee-Sting Cure

That "like cures like" is fully demonstrated by the fact that one of the best cures for bee-stings is honey. As soon as possible after being stung remove the stinger which the bee usually leaves and cover the afflicted part with honey, either in the comb or extracted. If used soon enough it is, as far as I have known, a sure cure. I have an acquaintance who was so badly stung that his arms, face and head and even feet, for he had low shoes on at the time, were literally one immense sting. The honey was applied and the following day he felt no ill effects whatever except a slight weariness.—ALLEINE LANGFORD, in Vick's Family Magazine.

Indian Cough Cure

W. T. Mundy sends the following recipe for a cough cure which he obtained from an Indian woman in Mississippi, and which he says cured him of a cough of 20 years' standing:

Take Indian turnips and slice them up thin, put into a jar and cover with honey, and then let stand 24 hours. Common turnips will do. Dose, a tablespoonful before meals and at bedtime."

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

CAPT. HETHERINGTON AND HIS BEE-KEEPING EXPERIENCE.

The excellent sketch of J. E. Hetherington by Mr. Elwood shows that the greatest bee-keeper in the world was not so much of a recluse as some of us imagined. Had been President of his State association, and also of the National. The fact that we seldom saw him in print and seldom heard of his being at a convention somehow made me assume that he *never* did these things. Not a fact. And if any one has set it down as selfishness, or lack of public spirit, that kept him so much out of sight and out of mind among our fraternity, the reading of these live pages from the pen of a personal friend is likely to bring an entire change of opinion.

A humorist would say that bee-keepers are distinguished by the mark that somehow every one invented everything. Hetherington's invention of everything rather scoops the rest of us by reason of the fact that he was so early in the field, 1852, and had a very inventive mind as well. First man in America to depend wholly on bees for a support. Takes 3,000 colonies, it seems, to give one the title of largest bee-keeper in the world. Somebody will go higher now just for the sake of doing it. Heavy wintering losses he had for some years; but for the last dozen years his success was quite good. We may remark, by the way, that the cellar-wintering of 3,000 colonies of bees is not exactly the same problem as wintering 100. To the good is 30 times as much animal heat; and to the bad is 30 times as much carbonic acid gas. More call for ventilation then to sweeten things up. Pages 137-142.

NO QUEEN-REARING SYSTEM IMPROVES BEES (?)

Our "Hutch" seems to be running for the office of champion heretic. Not content with contemplating all our bee-papers sealed up in their tombs, he proceeds to say: "There is no system of queen-rearing that will improve a strain of bees." Did you ever? Now it may be that a short-lived and non-prolific queen will usually transmit to her daughters the good qualities that her parents were endowed with—that is, transmit them without *very much* loss. I'm not ready to say there would be no loss at all. 'Spects she would not have been short-lived and non-prolific had she been properly reared. And had she been properly reared I should expect her to lift up a little instead of pulling down a little on the desirable qualities of her descendants. It is quite possible that the upbuilding power of queen-breeding pure and simple may have been very greatly overrated. If that is so perhaps we should be thanking Mr. Hutchinson for calling our attention to it, instead of scolding him for getting a wheel off the track. Undoubtedly wise observation and selection extended to a large number of colonies amounts to a good deal more than any arts of mere breeding. But let us not throw away our dimes because gold pieces are worth more. Improvement of a strain of any living creature often gets on very slowly; but also sometimes (we know not why) advances with a sudden long leap, which it is our business to seize and hang on to. We wouldn't be hanging on properly unless we bred in the best method we know. Page 150.

BEES IMMUNE FROM DISEASE.

When a fatal disease has had wide range and long prevalence, and individuals never exposed are few or none, nature gradually builds up an immunized strain. Thus, Prof. Harrison says, the sheep of Algiers have become partly immune to the disease called anthrax. He also thinks the bees of Europe have become partly immune to foul brood, on the same principle. I don't feel so sure of that as one might; but it would account very well for so many sure cures brought from over there proving nearly worthless on this side. Page 151.

DO BEES FREEZE OR STARVE?

As to those seemingly dead bees on page 163, I incline to introduce a third theory to account for death when it actually comes in such cases. They certainly did not starve to death, *for they were not dead*: neither did they freeze to death, for the same conclusive reason. But had they been left alone long enough they would have been dead—which cause then? Neither (let us say). Starvation comes from lack of nourishment; and organs that have ceased to act do not need nourishment—that is, do not come to need it any worse than they did when they ceased to act. Quite likely there is still some little remnant of invisible action somewhere—as long as life remains; but the amount of nourishment needed to support it would be correspondingly small. And one would say (though with some possibility of a big mistake) that it would take weeks, if not months, to starve a thoroughly chilled bee. As to freezing, a bee frozen for two hours is not dead. What more can freezing do after the first two hours? It is not easy to see. So I'll mildly conclude that certain chemical changes proceed quite well below the freezing point; and that they finally disorganize things and extinguish the vital spark. But the whole of this is theoretic. Practically the way to save just such a colony in the future is to give them more food to start in with. In some cases warmer quarters would cause the bees to eat less food, and so have enough. Matter of food in both cases.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to Dr. C. C. MILLER, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Transferring Bees

I have 6 colonies of bees in home-made hives with home-made frames. These I wish to transfer to new hives (8-frame) with Hoffman frames. I also desire to procure new brood-combs for each hive. I do not want increase; besides, I am not keeping bees for profit, neither do I sell any honey, but all is turned to our personal use. I intend to furnish the new hives with starters, and then shake the bees from the old hives in front of them, and thus combine transferring with swarming.

1. Is this method practicable or advisable, and, if so, when should I do it, during swarming-time (about the end of May and beginning

of June with me) or when they have queen-cells? or could I do it before there are any indications of swarming?

2. Could I transfer in the above manner during fruit-bloom, and, if so, will any swarms issue from colonies transferred in this manner?

3. Can I use only starters in the new hives, or must I use full sheets of brood foundation?

4. Could I use the brood-combs from the old hives in extracting-supers? I intend to run 3 colonies for extracted and 3 for comb honey.

5. By transferring them in the manner outlined, would not the greater part of the honey from white clover (which blooms in this locality from the beginning of May) go into the brood-chamber rather than into the sections? INDIANA.

ANSWERS.—1. The method is practicable, and under the imposed conditions perhaps advisable. If you do the work before swarming-time, there is danger that you may hinder the best development of the colony on the one hand, and on the other hand that if there is no such hindrance there is likely to be swarming when swarming-time comes. It will be safer to wait till swarming-time, and it may save some work if you let the colonies swarm naturally, hiving them on the new frames.

2. If you operate in fruit-bloom, and if you don't give the bees too much of a set-back by it, they will be likely to swarm. If you operate in swarming-time, they will not be likely to swarm.

3. You can do either way, but you're likely to have so much drone-comb with starters that it may be cheaper in the long run to have frames entirely filled with foundation.

4. Yes, they will do nicely, giving you 2 stories of extracting-combs for each of your 3 colonies.

5. No, you will probably find that the first thing the queen will do will be to fill the frames with brood, giving way to honey later in the season.

The following plan may be worth your consideration: When the colonies become strong, but before any have swarmed (it may be well to even up in strength by giving sealed brood from stronger to weaker) treat 3 of them after this fashion: Put the empty hive of foundation in place of the old hive, put a queen-excluder on, and set over this the old hive. Find the frame with the queen, and shake off bees and queen at the entrance. Over this, for a third story, set a story of brood from one of the other 3 hives, shaking the bees upon foundation. The 3 colonies with the 2 stories of brood above the excluder will become very strong, will not be likely to swarm, and will do fine work for the extractor. The other 3 colonies will not be so strong, but will do fair work in sections. If you would like the stronger force to work on sections, you can make the exchange in 10 days or so. Lift off the 2 stories of brood; put in their place the sections, bees and all, from one of the other hives; brush off all the bees from the brood, and put the 2 stories of brood where you took the sections from.

Surplus Combs for Hiving Bees

I have some surplus combs. Is it best to hive bees on these or on foundations? I run for comb honey. MISSOURI.

ANSWER.—Some prefer foundation, but I think most bee-keepers would rather have the combs.

Rearing Queens in Different Ways

How can I rear queens in different ways? WISCONSIN.

ANSWER.—I'm not sure that I know enough to tell you all the different ways that are used to rear queens, but some of the ways most in use are the Doolittle plan, the Alley plan, and the old plan of making a colony queenless and allowing it to select its own larvæ from which to rear queens. Another way is to encourage a number of afterswarms for the sake of securing a queen from each. Possibly I don't get at the right drift of your question. If not, please ask again, and I'll try my best.

Prevention of Swarming

I have been reading and studying your book, "40 Years Among the Bees," all winter and hope to profit by it the coming summer. I have only recently become a subscriber to the American Bee Journal, and so I don't know whether you have ever made any report in it as to your success, or lack of it, in practicing your "foundation method" of treating bees preparatory to swarming. I note that you say in your book that the first two years this method was successful, but in 1902 it was not so much so. How did the seasons of 1903 and 1904 serve you in this practice, or have you some better method now? MASSACHUSETTS.

ANSWER.—I'm not sure that I gave the foundation plan any further trial, because, even if it did *nearly* always succeed, I'd rather have something *always* successful. During the past two years the following plan has had the right of way:

As soon as there is danger that there may be preparation for swarming, the search every 10 days or so for queen-cells is begun, as given in "Forty Years Among the Bees," page 184. When cells are sufficient in number, and sufficiently advanced, to show that the bees are not to be balked in their attempt to swarm, the cells are destroyed and the queen removed. About 10 days later all cells are again destroyed and a young laying queen given. If she is found laying all right at the next visit there is no need to go into that colony again during the rest of the season. Sometimes a colony swarms unexpectedly during our absence, and at the next visit we find that it has swarmed by the absence of young brood, the clipped queen having been lost. We destroy queen-cells, and at the next visit give it a young queen, after killing all queen-cells. Sometimes we have no young queen ready, in which case we give them back their old queen, or any other queen available. If an old queen is given the colony needs further watching, for although it generally does not swarm, sometimes it does; whereas when it receives a queen of the current year's rearing, there is practically no danger.

Using Combs and Honey from Hives Where Bees Died

1. Will it do to put a nucleus in a hive where the bees died and left considerable honey? And would it do to give this nucleus a couple of frames of brood and bees from a strong colony to help build the nucleus up, or would they fight and kill the queen? WEST VIRGINIA.

ANSWER.—The plan you propose will work all right if you do not give too many strange bees at a time. Not that the bees are likely to fight at this time of the year, but there might be danger to the queen of the nucleus. Don't give more than one frame of brood with adhering bees at a time, and even with all that number there might be danger with a very weak nucleus. In that case, don't give the frame of brood, but just shake in a few bees.

It is only fair to warn you that unless you have very strong colonies from which to draw, the damage done to the colony from which you draw will be likely to overbalance the benefit to the nucleus.

Breeding Queens of Different Races

I am interested in making some experiments in breeding queens of different races. I expect to have queens of Carniolan, Cyprian and Caucasian races the coming summer. Now I want to know what would be the best method of managing the drones. I am going to select a mating-ground where I may be reasonably certain of immunity from the races I do not want to cross with. I want to manage this mating business so as not to be obliged to take *whole colonies* of bees to the place. The queen-side of the proposition is, of course, simple. I am going to use the "baby nuclei" for the queens.

My question is, can I trap out a sufficient number of drones and unite them with the baby nuclei containing the queens to be fertilized, and feel reasonably certain that I will succeed? Or would it be a more certain method to take the drones of the race that I want to use for crossing in a *colony* of that race? I want, as far as possible, to keep from interfering with the work of whole colonies, and besides that, I want to handle the mating problem with my horse and buggy, and not be bothered with a wagon.

This may seem a silly question to ask, but I want the benefit of your wisdom and ripe experience in these things, so that I may not spoil the whole equipment at the very outset.

I put away 25 colonies last fall, and all came through nicely, and are building up in good shape now (March 31). I followed your advice given in "Forty Years," where you said that if you were as good a bee-keeper as you would like to be you would have frames of honey stored away for feeding in the spring. I had 50 or more fine, straight combs of honey to slip in where they were needed this spring. It is quite a satisfaction to be able to put them in, too. ILLINOIS.

ANSWER.—It's all very well for you to talk about my "ripe experience" and all that sort of thing, but when you come at me with a question outside the range of any experience of mine, either ripe or green, what is left for me but to say, "I don't know?" I can only say what I do or don't think. I don't think you will make so good a success with drones in baby nuclei as in full colonies: but it will be so much easier to manage with the nuclei that I believe I would run the risk of a larger percent of failures and not have the bother of the full colonies. At least you can afford to make trial at first with the "babies," and if they don't work satisfactorily you will still have enough of the season left to do the other way. On the face of it, one would be inclined to think there could be no question in the case, the nuclei are queenless, and queenless bees cherish drones, so drones in the nuclei must be all right. But exceptions occur sometimes in weak nuclei. For instance, queenless bees, if they build comb at all, build only drone-comb. Yet a queenless nucleus will build worker-comb *if weak enough*. So unless some one has tried it and knows, I should have just a little fear that a nucleus might kill off its drones if weak enough. Trial, however, may show that there is no ground for the fear. Let us hope so. In any case it will do no harm to make the nuclei just a little stronger than is necessary without any drones.

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Reports and Experiences

Fastening Transferred Comb in Frames

In a recent issue of this Journal directions are given for fastening combs in the frames when transferring, by winding strings around the frames and combs. I like the plan of using splints a little longer than the depth of the frame—splints made from straight-grained wood that will split readily, they being about ¼ inch wide and ⅛ inch thick. Place as many sticks on a smooth board as will be needed to hold the comb in place. Lay the frame on top of the sticks, then lay the pieces of comb on the splints, placing other splints opposite the splints under the comb; tie each pair together at the ends outside of frames, the lower end to project as little as possible. When the bees have fastened the comb to the frame and the pieces of comb together, cut the strings at the upper end and work the splints out. WM. CLARK.

Livingstone Co., N. Y., April 11.

New Mexico Foul-Brood Law—Honey Prospects

A foul brood Bill has just been passed by the New Mexico Legislature and is now a law. While it lacks much of what we desired it is a public recognition of the bee-keeping industry and a big step ahead of no law at all.

Section 1 provides that all bees, hives and fixtures be kept properly disinfected and free from foul brood and contagious diseases.

Section 2 makes it a misdemeanor to keep bees or fixtures infected with foul brood or contagious diseases, and imposes a fine of not less than $10 nor more than $50, or 30 days in

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Dovetailed Hives from Michigan White Pine, $1.25 each, 1½-story for comb honey. Address,

The Wood Bee-Hive and Box Co.
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FOR SALE

The apiary of the late Charles B. Achard, is for sale in Roselle, Du Page Co., Ill. It contains 11 colonies, 30 complete Danzenbaker hives (15 of them unused), tools, sections, foundation, etc. Inquire of

MISS A. M. ACHARD, Roselle, Ill.
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QUEENS

Best 3-band Italian Bees free from disease for—Untested Queens, early in May, 75 cts.; 2-frame Nucleus, with Queen, $2.25. Eight years' experience.

Chesley Presswood,
McDONALD, Bradley Co., TENN.
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the county jail, or both fine and imprisonment for the violation of this Act.

Section 3 provides that when any competent person makes a written complaint before a Justice of the Peace where foul brood exists, the Justice of the Peace shall issue a warrant for the arrest of the offender and try the case in the usual manner.

Section 4 states that upon conviction the Justice of the Peace shall declare all bees, hives and fixtures infected to be a nuisance, and issue a writ to the constable or sheriff for the immediate destruction of the same by burning.

Section 5 provides that Justices of the Peace shall have all jurisdiction under this Act, and that costs be assessed as now provided by law.

In Northwest New Mexico rains have been abundant and prospects for bee-pasture are the best. Alfalfa, sweet clover, and cleome, our main dependents, can hardly be failures under the conditions. The coldest weather was 1 degree above zero, and the bees have had about the usual number of winter flights. Bees with stores and free from foul brood are in fine shape now. A few colonies were lost through starvation, on account of poor conditions last year.

The dearth of honey last season because of the weakness of the bees when the harvest did arrive, will have a tendency to boost the price this year.

A railroad now in process of construction to this country will open up new markets, give us a way to reach them, remove many of the disadvantages in securing supplies, and promote a big increase in orchards, small fruit, ranches and alfalfa fields. Hauling honey or supplies to or from a railroad station 50 miles distant, over rough mountain roads, would cause many of our eastern friends to quit the business. It isn't a snap. With sugar way above the $7 mark at wholesale, and choice comb honey retailing at 8⅓ cents, we are in no danger of being persuaded to feed our bees sugar; so they will manufacture *unadulterated* honey for our customers. Cleome and alfalfa are hard to beat, but if we could induce our bees to mix in some of New Mexico's glorious sunshine, you bee-men of the land of fogs would be left as badly in the cold as you were this winter.

W. A. Ballinger.

San Juan Co., N. Mex., March 18.

Swarming—Wasp's Nest in a Bee-Hive

My bees commenced swarming last season June 5, and cast 3 swarms each. I have four colonies, 2 of which I wintered on the summer stands, and the other 2 in the house, and all are doing well. One of those inside has built 3 square inches of comb.

I have been experimenting for the past year, and find that when a colony of bees robs another colony they unite, and when a

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24A48t **No. 75, Birmingham, Alabama.**

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We wish to say that we are now loaded with a big stock of **Fine Bees and Queens** ready to mail now; no delay; send for what you need at once.

We breed the 3 and 5 banded Italians, Cyprians, Carniolans, Holy Lands, and Albinos, in their purity, in separate yards from 5 to 30 miles apart.

Tested queens, $1.25 each; Breeders, $3 to $5 each. Untested, from either race, 75 cts.; 6 for $4, or $7.50 per dozen.

Full colonies, 1, 2 and 3 frame Nuclei cheaper than you ever bought good stock for before. No better to be had. Write for price-list **FREE.**

Safe arrival and perfect satisfaction guaranteed or your money returned. Prices of Queens to dealers, or in large lots on application.

We can sell you **BEE-HIVES** of yellow pine at about half the cost of white pine goods. Get our prices before you buy.

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W. Atchley, Mgr.
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Are Perfect in Workmanship and Material.

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AGENCIES.—Trester Supply Co., Lincoln, Neb.; Shugart & Ouren, Council Bluffs, Iowa; Fulton & Ford, Garden City, Kan.; I. H. Myers, Lamar, Colo.; Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex. **KRETCHMER MFG. CO., Red Oak, Iowa.**

WANTED Man of 15 years' experience wants position as apiarist. Would take charge of an apiary on shares also. My method of handling bees is perfect, and can make my own hives. Address,
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Gauges 18 different shapes of starters. Easy to cut 100 starters per minute. Illustrated circular free. J. E. ENYART & SON,
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HONEY-JARS.

For a limited time we offer No.25 Honey-Jars, porcelain cover, metal screw cap, holding one pound of honey net, one gross in case complete in 5-gross lots, $4.00 per gross; less quantities, $4.50 per gross, f. o. b. New York. If you want to secure some, let us know at once.

HILDRETH & SEGELKEN,
265 & 267 GREENWICH ST., NEW YORK, N. Y.
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natural swarm flies over the land they go like a flying martin. I lost 2 swarms last year, and one the year before. Last year 2 that left returned, and one of them tried to go into the hive from which I had lost a swarm. It seemed to know where it belonged.

One day my father found a swarm of bees on a bush, hived them, and took them home. I went back with a box to get the bees that were left. Father said they would do nothing without a queen, so I got a wasp's-nest and put it in with my bees, and waited until they hatched out, then I called papa, but he hardly thought they were the right kind of "queens," so I quit.

I think I heard my papa say when I was a little boy that I had a great-uncle named Dr. C. C. Miller, who was a mighty bee-keeper.

JAMES L. A. MILLER.

Gasconade Co., Mo., March 14.

Small Winter Loss—Good Prospects

Though we have had one of the most severe winters since 1880-81, I lost only one colony and had 2 queenless out of 39, and I had them all on the summer stands except 13, which I have at my home in town. They were in a basement for about 3 weeks in February, but those on my farm were on the summer stands throughout the winter. I looked them over about 3 weeks ago, and find they have plenty of stores.

This is about the nicest month of March we ever had. The wheat and grass are looking fine, and there is a good prospect for another good crop of honey. I fed my bees well last September, and now they are very strong.

L. A. HAMMOND.

Washington Co., Md., March 27.

Bees Wintered Well

The bees having wintered well packed in oats in winter cases, began to bring in some pollen to-day, and on examination I found some had larvæ already. I do not believe I will ever try another way to winter bees than by packing the hives in winter-cases, in chaff, oats, or similar material.

I read the American Bee Journal with great pleasure and profit. There has been practically nothing in it, the smallest letter not excepted, that has not taught me something. It is not only instructive, but is also inspiring and encouraging to one's advancement in bee culture. I believe that with its help I shall make a success in bee-keeping.

(REV.) J. G. BAERMANN.

Osceola Co., Iowa, March 31.

Select Te ted Queens—Carniolans, Italians and Blacks

In 1902 I bought a select-tested Italian queen. I could not wish for better-marked drones, but the workers vary from one to 3 bands. She could not have been purely mated. Her daughter in the old hive mated with a drone from the old hive—in fact there were no other drones but black ones to mate with. This

DON'T BE BOTHERED

with lice on poultry. Schild's Lightning Lice Killing Machine instantly removes them from tiniest chick or fat gobbler. 3 sizes. Also Poultry Bits, Lice Murder, Lightning Lice Killing Powder, etc. Catalog free.
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QUEENS ITALIAN QUEENS

BY RETURN MAIL.

Try Taylor's 3 banded leather-colored and 5-banded Golden Queens—the best honey-gatherers in America. Untested, 75c each, or $8 per dozen; tested, $1, or $10 per dozen; select tested, $1.50 each; breeders, the best, $3 each. I have been breeding queens for 17 years, and I know what a good queen is. No small queens sent out. I guarantee safe delivery. Send your orders to J. W. TAYLOR, Ozan, Ark.
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ADRIAN GETAZ,
44Atf KNOXVILLE, TENN.

☞J. G. Goodner, of this State, writes me that he "prefers to pay $25 for a Rietsche Press than do without it."—A. G.

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Golden Queens and Bees

Ready June 1. Hustlers for honey; very gentle, non-swarming. Price-list now ready—also an 8-page leaflet on queen-rearing, including my experience in curing pickled brood, black brood and bee-paralysis, sent free to all who apply.

HENRY ALLEY,
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$12.80 For 200 Egg INCUBATOR

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GEO. H. STAHL, Quincy, Ill.

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Tested Queens by Return Mail,
—$1.00 Each—

We have a large number of Choice Tested Queens, reared last September and October, and wintered in 4-frame nuclei; these queens are vigorous and prolific, and of our fine strain of Three-Band Italians. Just the queens to build up weak colonies. Try them. Send for circular.

J. W. K. SHAW & CO.
13Atf LOREAUVILLE, Iberia Par., LA.

queen's drones are half black. In the spring of 1904 the select queen ceased to lay, and the colony dwindled to nothing, so I lost it, with over 25 pounds of sealed honey in the hive. I never have had one pound of honey in the sections from those Italians until last summer, when 8 sections were filled by a prime swarm which issued June 30.

I have had 2 second swarms leave for the woods, one in 1903 and another in 1904. I have one colony of Italians now, and the queen is the daughter of the select-tested queen.

I think a tested queen should breed both workers and drones so that all should be marked alike. I don't see how breeders get so many different grades from one breeding queen. As I look at it there are but two grades, one must be pure, and the other impure.

After testing the queen from Breeder No. 1 I bought three queens from Breeder No. 2. The drones from 2 of those queens had 3 bands, one having a few darker drones, but the workers from all 3 were well marked. Those 3 queens were superseded in the spring of 1904. I bought them in August, 1902. The young queens in the 3 hives where the supersedures took place are truly mated with Carniolan drones, but the daughter from the mother that produced drones is half black.

I have 4 young Carniolan queens that breed 3-banded drones. I supposed the queens were Italians, but was told after I bought them that they were Carniolans. I had heard that they were great swarmers, so I bought lumber and made 16 hives, 17x11 inches deep, with 8 frames. I have had those bees two seasons, but have not had a swarm from them yet. These are the colonies that gave me my surplus honey, all No. 1 white. They are peaceable, and I can walk or stay any length of time about the hive without getting stung.

I put 27 sections on each of 3 hives—two Carniolans and one black. I set the sections on the honey-board, with ⅛-inch slat-fence between sections. By June 20 the Carniolans had their sections filled, and the blacks a few days later. I now saw that I had made a

—ITALIAN—
Bees, Queens and Nuclei

Choice home-bred and imported stock. All queens reared in full colonies.

One untested queen..... $1.10
One tested queen......... 1.65
One select tested queen.. 2.20
One breeding queen..... 3.30
One comb nucleus (no queen)................. 1.80

Untested ready in May; all others ready now from last season's rearing.

Safe arrival guaranteed. For prices on quantities and description of each grade of Queens, send for free price-list. **J. L. STRONG.**
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mistake. How was I to take off those sections without getting stung? They were across the hive, with glass front and back. My folks kept asking me when I was going to take the honey off, expecting to see a fracas, and I expected the same. I got to work and removed one light of glass. No fight. I lifted one section with my knife, and with a turkey-wing feather I brushed the bees off on the front of the hive. I removed every section in this way, but in taking off the last 3 sections I struck the one I had in my hand against another, and was stung.

From the other Carniolan colony I had been taking out brood for queen-rearing, so on its hive I put 6 sections crosswise of the hive, with two lights of glass. Inside of a week those 6 sections were plump full of bees working on the strips of foundation. So I made a super with 9 frames holding 3 sections each, had 2 frames to put those 6 sections in and removed the glass, picked up the 6 sections and bees, placed them in the frames, and hung the frames in the super. Not a bee tried to sting—they were too much engaged in comb-building. Every time I took off sections from the black colony I got stung.

We had white clover from June 15 up to the 1st of September. I saw one lonely black bee gathering from it. The blossoms were plentiful on the roadsides, in the fields, and anywhere one might look for it. The basswood yield was good. In a big basswood tree near by bees could be seen going home after sundown. We could see the nectar in the blossoms, and I should judge that one flower's nectar would be all that a bee could take in one load.

I have 5 Carniolan colonies, 1 Italian, and 3 blacks. I have not lost any yet this winter.

E. Tucker.

Genessee Co., N. Y., March 7.

CONVENTION NOTICES.

Connecticut.—The 14th annual spring meeting of the Connecticut Bee-Keepers' Association will be held in Room 50 of the Capitol, in Hartford, Tuesday, May 2, 1905.

Mrs. Edwin E. Smith, Sec.

Watertown, Conn.

New York.—The annual spring meeting of the Fulton and Montgomery Counties Bee-Keepers' Society will be held in Amsterdam, N. Y., at the Central Hotel, on Tuesday, May 2, 1905, at 10 o'clock a.m. All are invited.

West Galway, N. Y. T. I. Dugdale, Sec.

Next National Convention at San Antonio, Texas.—For years Texas has been asking that the National Bee-Keepers' Association hold its convention within her borders, but there has always seemed to be some reason why the meeting should be elsewhere. There is now no reason why it should not be held in Texas this year, if it is ever to be held there. Texas is the largest state in the Union, and stands at least second, if not first, in honey-production, while she has a good list of members in the National Association. Considering all of these facts the Executive Committee has decided upon San Antonio as the place for holding the next convention. The exact date has not yet been decided upon, but it will probably be the latter part of October, after the busy season is over with the bees, when the weather is comfortable, even in the South, and when cheap excursion rates can be secured.

W. Z. Hutchinson, Sec.

SINGLE COMB BROWN LEGHORNS

Noted Winter-Laying Strain. Cockerel Mating, headed by Rochester Prize-Winner; Eggs, $2.00 per 13. Pullet Mating, headed by pullet line; pedigreed; Exmoor males. $2 50 per 15. Flock on range, headed by 2d Wis. State Fair winner, and others of equal quality, $1.00 per 15. Hens in all pens result of 15 years' scientific breeding.

Single Comb Buff Orpingtons. The grand new breed. No better quality in existence. $2 00 per 15 eggs.

Mammoth Bronze Turkeys. Hens up to 23 pounds each. Not inbred. Eggs $2.50 per 19; 25 for $5 00.

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Catalog and prices on Honey on application. If you want **Good Goods at Factory Prices and Prompt Shipment,** send your orders, or call on us.

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SAVE MONEY

See our prices on all **Bee-Keepers' Supplies** before you buy. Send for Catalog. We carry a full and complete line, will not be undersold, and will discount prices of any competitor.

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We represent the American Can Co in Texas as their sole and exclusive agents for Honey-Cans. We also handle Dadant & Sons' world-famous Comb Foundation exclusively. Get our prices before buying.

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BINGHAM Original Direct Draft CLEAN Bee Smokers
4 Largest Sizes Soot Burning
Never Go Out
And last from 5 to 21 years
Pat'd 1878, '82, '92 & 1903
Tin 4-in. Smoke Engine 3½-inch 3-inch 2½-inch 2-inch Wonder
$1.50. $1.10. $1 00. 90c. 65c—per mail.
Sent on receipt of price per mail.
T. F. BINGHAM, Farwell, Mich.

Otisville, Pa., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. Fred Fodner.

VIRGINIA QUEENS Italian Queens secured by a cross, and years of careful selection from red-clover queens and superior stock obtained from W. Z Hutchinson. Untested queens, 75c; after June 15, 60c; tested queens, $1.00; after June 15, 75c; selected tested queens, $1 25; after June 15, $1.00. Write postal card for circular. CHAS. KOEPPEN,
17A26t FREDERICKSBURG, VA.

One-Piece Sections
"Columbia Brand"

Strictly High-Grade in Timber, Quality and Manufacture.

Prices on application.

COLUMBIA MFG. CO, ANTIGO, WIS.

For Queens SEND TO JOHN W. PHARR Berclair, Tex.

He will furnish at same prices as last year: Tested, $1; Untested. 75c; 5 for $3.25; 10 for $6; 15 for $8.25; 25 for $12.50; 100 for $45. He breeds Goldens, Carniolans and 3-Band Italians. Also 1, 2, and 3 frame Nuclei, and full colonies. Prices given on application. Pharr pays the freight, and guarantees satisfaction on all Queens. To do justice and judgment is more acceptable with the Lord than sacrifice.—(Prov. 3: 21.) 6Atf

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Wanted BEES in shipping-boxes on L. or Danz. frames ready to ship now. State kind, price, safe arrival guaranteed. Address,
J. B. MASON,
17Atf MECHANIC FALLS, MAINE.

Bee-Keepers' Supplies.
Send for Catalog.
Leahy Mfg. Co., East St. Louis, Ills.
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We handle the best makes of Dovetailed Hives, one-piece Sections, Comb Foundation, and all other articles needed in the apiary, at lowest living prices. Bees and Queens for sale in season. A. W. SWAN & CO., Centralia, Kan.

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850,000 GRAPE VINES

69 Varieties. Also Small Fruits, Trees, &c. Best rooted stock. Genuine, cheap. 2 sample vines mailed for 10c. Descriptive price-list free. LEWIS ROESCH, FREDONIA, N.Y.

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Book orders for GOLDEN ITALIANS, RED CLOVERS and CARNIOLAN QUEENS.

☞ For prices refer to my Catalog.

At Root's Factory Prices

C. H. W. WEBER CINCINNATI ...OHIO...

Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

Honey and Beeswax

CHICAGO, April 18.—A carload of comb honey, (said to be from Colorado) came on the market about the first of the month. It was placed with a firm that does not make a specialty of honey, and to some extent has upset prices when looked at in print. It is put up in 24 section flat cases with wood slides instead of glass, and is more or less candied. Choice white comb brings 12½c; No. 1, 11@12c; amber, 8@10c. Extracted, white, 6@7c; amber, 5½@6½c; price being governed by quality, flavor and package. Beeswax 30c if clean and of good color.
R. A. BURNETT & CO.

CINCINNATI, April 20.—The conditions of the honey market to-day are not encouraging. The consumption is lacking, although we are looking forward to brighter days in the honey market. We continue to quote amber extracted in barrels and cans, 5½@6½ cents; white clover, 7@8c. Fancy white comb honey, 12@13c. Beeswax, 28c.
THE FRED W. MUTH CO.

NEW YORK, April 19.—There is no change in the condition of the honey market. Very little comb honey selling and prices ruling about the same as our last quotations. Extracted in fair demand only. Beeswax firm at 30c.
HILDRETH & SEGELKEN.

PHILADELPHIA, April 19.—There has not been much call for honey in the last two weeks. Prices remain unchanged. We quote: Fancy white, 11@12c; No. 1, 10@11c; amber, 9c. Extracted, white, 6@7c; amber, 5½@6c. Beeswax, 28 cents.

We are producers of honey and do not handle on commission.
WM. A. SELSER.

BOSTON, March 9.—The demand for comb honey still continues light with heavy stocks on hand. Fancy white, 15@16c; No. 1, 14c. Extracted, 6@8c, according to quality.
BLAKE, SCOTT & LEE.

KANSAS CITY, March 31.—The honey situation does not improve. While there is a little better movement the prices seem to be lower. Fancy white brings $2 a case; No. 1, $1.75; amber and lower grades from $1.25 to $1.50. Extracted, 4½@6c. Beeswax, 28c.
C. C. CLEMONS & CO.

CINCINNATI, O., April 18.—The large stock of comb honey, yet offered with hardly any demand caused lower prices. I quote fancy water white at 12c; other grades in proportion, lower. Extracted is in the usual demand for this time of the year; quote amber in barrels at 5¼@5½c; in cans, ½c more; white clover, from 7@8c. Beeswax, 28c.
C. H. W. WEBER.

ALBANY, N.Y., Feb. 8.—Honey market dull this extreme cold weather, especially comb, which candies or granulates and cracks easily. We quote: Fancy white, 13@14c; No. 1, 12@13c; mixed, 10@11c; buckwheat, 10@11c. Extracted, better demand: Buckwheat, 6@6½c; white, 6@6½c. Buckwheat most in demand, as the Jewish people will have no other. Beeswax, 30@32c.
H. R. WRIGHT.

SAN FRANCISCO, April 12.—White comb, 1-lb. sections, 11@12 cents; amber, 8@10c. Extracted white, 5½@6 cents; light amber, 4@5c; amber, 3@½3c; dark amber, 2½@3c. Beeswax good to choice, light, 29@30c; dark, 27@28c.

Stocks on the local market are not heavy and mostly common amber grades. The demand is slow. The new season being near, handlers are awaiting arrivals of new crop, which are expected to put in an appearance early in May.

IN THE HEART OF MICHIGAN

Within a hundred miles of me are over ¾ of the bee-keepers of Michigan. I am on the Pere Marquette R.R., which completely covers this region. Root's Goods, Factory Prices, Prompt Service, Low Freight. Send for Catalog.

GEORGE E. HILTON,

15A12t FREMONT, MICH.

Please mention Bee Journal when writing

With tears of sweetest joy,
That nothing can alloy,
I arise to say that
(Excuse this shabby hat)

DOOLITTLE

Has worked so very hard
That he has got a "pard"
To help him with his bees,
And if you wish to please

yourself and us, send for a circular giving particulars regarding our fine **ITALIAN QUEENS.**

Prices for Queens this season will be as follows:

	1	3
Untested	$1.00	$2.25
Tested..........	1.25	3.00
Select Tested ..	1.50	4.00
Select Tested (1904 rearing) ..	2.50	....
Select Breeding	5.00	....
Extra Select Breeding	10.00	....

Prices quoted by the dozen or hundred.

Doolittle & Clark,

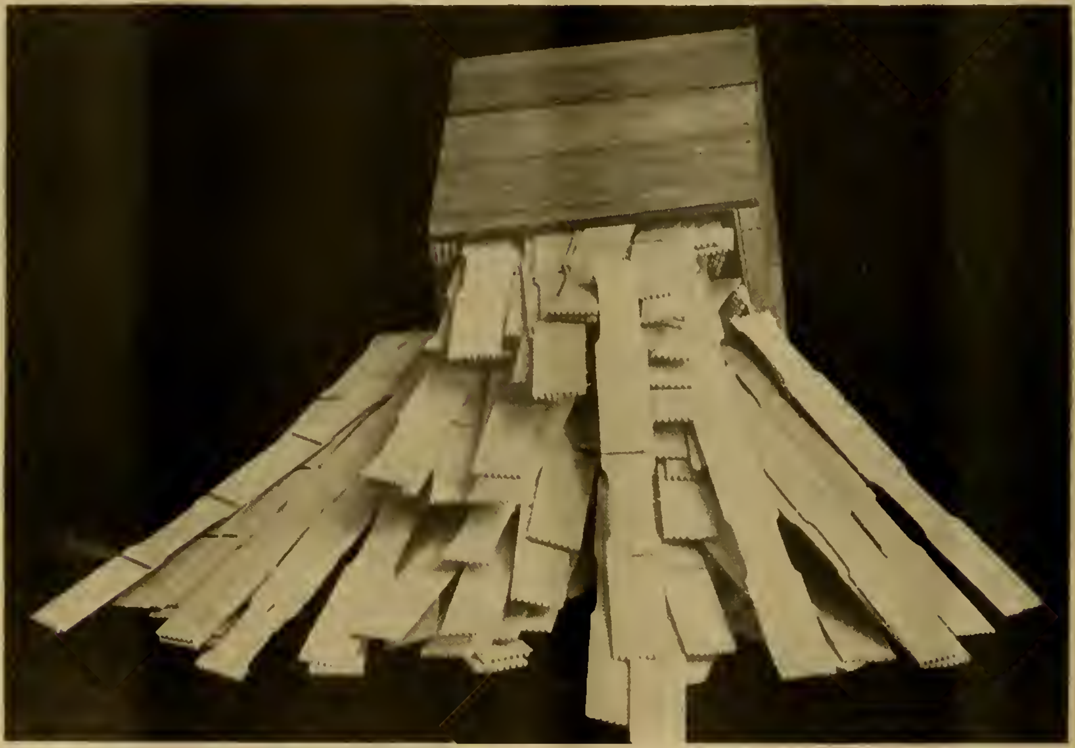
11Dtf Borodino, Onondaga Co., N. Y.

Please mention Bee Journal when writing.

"There's no use crying over spilt sections."
You won't have to if they are

LEWIS' SECTIONS

You are not taking chances when you order Lewis' Sections.
Our name is on every crate.



These are Lewis' Sections. Aren't they Beauties?
Read what others say about them:

G. B. Lewis Co., Watertown, Wis. Deerfield, Iowa.

Gentlemen:—I want to say that I consider your make of sections the nearest perfect of any I have ever had. I have folded packages of 500 without breaking one and I cannot say that of others I have used.

Yours truly, Geo. Brown.

G. B. Lewis Co., Watertown, Wis. Centralia, Kas.

Gentlemen:—Everybody wants Lewis' sections.

Yours truly, A. W. Swan.

Grand View, Iowa, June 3, 1904.

G. B. Lewis Co., Watertown, Wis.

Gentlemen:—I have received those sections in good shape and I am well pleased with same. They are all right in every way. I shall recommend your bee-supplies to other bee-keepers. I think you make better goods than any other firm in the world. Accept my thanks.

Yours truly, Geo. B. McDaniels.

Kenton, Ohio, May 4, 1904.

G. B. Lewis Co., Watertown, Wis.

Gentlemen:—The goods are simply fine in every respect. We have compared a few of the No. 1 sections bought of another firm which we carried over from last season with your No. 2 and find that the No. 2 are superior.

Yours truly, Norris & Anspach.

Lewis' Sections have made the Lewis Co. famous. They are for sale all over the world.
Send for free Catalog of 88 pages.

G. B. LEWIS CO. Manufacturers of Bee-Supplies **Watertown, Wis.**

American Bee Journal

OUR TOIL DOTH SWEETEN OTHERS

45th Year CHICAGO, ILL., MAY 4, 1905 No. 18

ASSACHUSETTS

THE A. I. ROOT COMPANY

(See page 324.)

OFFICE AND WORKS OF THE A. I. ROOT CO.

A. I. ROOT, President

(Three engravings below used by courtesy "White's Class Advertising.")

ERNEST R. ROOT,
Vice-President

ARTHUR L. BOYDEN,
Secretary

JOHN T. CALVERT,
Treasurer

Every Bee-Keeper

Or Prospective Bee-Keeper

should read GLEANINGS IN BEE CULTURE. It gives you the latest in the apicultural world. If you have honey and wax for sale it tells you the market prices. If you have troublesome questions to solve, it helps you. The very best bee-keepers write for it. The following noted writers contribute regularly:

C. C. MILLER,
Of Illinois.
G. M. DOOLITTLE,
Of New York.
J. A. GREEN,
Of Colorado.
LOUIS SCHOLL,
Of Texas.
PROF. A. J. COOK,
Of California.

Semi-monthly. Over a thousand pages annually. Illustrated fully with the finest half-tones, printed on the best paper. It has the largest circulation of any bee-paper in the world. $1.00 a year. Sample copy free.

*

TRIAL OFFER!

Gleanings in Bee Culture, 6 months, 25c.

We are certain that any one interested in bees would be greatly benefited by becoming a subscriber to GLEANINGS IN BEE CULTURE. We want you to give it a trial. After you have received a few numbers we are sure you will become a permanent subscriber. We therefore make a special trial offer of 6 months for 25c. Fill in your name in space below, remit 25 cents, and the paper will begin at once.

Enclosed find 25 cents, for which send me Gleanings in Bee Culture 6 months.

NAME ....

P. O. ....

COUNTY ....

STATE ....

Root's Goods in Chicago.

For the saving of freight for our western trade, as well as to give much quicker delivery, we opened a branch office in Chicago, Oct. 1, 1903. The following taken from our catalog of last year, explains the transfer then made:

The business for many years conducted by George W. York & Co., at 144 E. Erie Street, as agent for The A. I. Root Company's supplies, is this day transferred to The A. I. Root Company, to be conducted as a branch office. Please note change of name to avoid confusion in our work. THE A. I. ROOT CO.
October 1, 1903.

To Our Customers and Friends:

In transferring back to The A. I. Root Company the bee-supply business, which we took over from them some years ago, we do so with regret, as we have labored hard to build up a large and honorable trade in bee-appliances, and value beyond expression the valuable patronage accorded us during the years. We trust the same will be continued to our successors in the business.
GEORGE W. YORK & CO.
Chicago, Ill., Oct. 1, 1903.

The conveniences offered by the branch office were evidently appreciated by the bee-keepers of Illinois, Wisconsin, and other States beyond, for the business done by the branch was much beyond our expectations. During the rush season—April, May and June—orders came in so fast that, in spite of frequent orders to the factory for another car of goods, the stock ran low, and some delays and annoyances thereby were caused. Some little confusion because of change of name and manner of conducting the business (from agency to branch office), but these have all been overcome. We are better than ever prepared to handle your business carefully and promptly, and solicit your patronage.

Low Freight and Quick Delivery.

A glance at any railroad map will show the superiority of Chicago as a shipping-point. Because of the great number of railroad and steamboat lines centering in Chicago, and the large stock of goods we carry, we can give you the best of service. This office is in constant touch with the factory and home office, and in many cases can give your order quicker attention and earlier shipment than the factory, to say nothing about the saving in time and transit and lower transportation charges.

Wholesale and Retail.

We are prepared to furnish goods at wholesale and retail, the same as the home office.

Terms.

Our terms are cash with the order. We pay cash for material, and pay our helpers cash every week for their work; therefore we must have cash in advance for the goods furnished. Do not ask for credit.

Beeswax Wanted.

We are in the market for good beeswax the entire year, and pay the same prices as quoted by our home office in each issue of GLEANINGS IN BEE CULTURE. Send your wax direct to us for cash or in exchange for supplies.

Extracted Honey.

In the course of a year we use large quantities of extracted honey, and are pleased to get sample and prices from parties who have honey to exchange for supplies. We are also prepared at all times to furnish first-class honey to any one who is in need of same, either bee-keepers who have a demand for more than they can furnish, or from dealers. Get our prices before you place your orders elsewhere.

DANZENBAKER HIVE.

"Facts About Bees", a 64-page book written by Mr. F. Danzenbaker, giving a complete description of his famous hive and directions for using. Full of valuable information. Sent on receipt of a 2-cent stamp to pay the postage. **Send for it.**

The Danzenbaker Hive

THE COMB-HONEY HIVE.
Three Points of Excellence:

QUALITY
You can produce better-looking honey.

QUANTITY
You can produce more of it.

PRICE
You can get more per pound for it.

THE A. I. ROOT CO.

SPECIAL NOTICE.

The great popularity of the Danzenbaker hive has brought the shallow-brood-frame and the tall plain sections into prominence. It must be remembered that no other hive contains the essential features of the Danzenbaker. The success of this system depends on having everything JUST RIGHT, so you should place your order for the Danzenbaker hive with our office, or any of our branches or regular agents.

Address all Orders, Remittances, Inquiries, etc., to

THE A. I. ROOT CO., 144 East Erie Street, Chicago, Ill.

ESTABLISHT IN 1861
AMERICAN
THE OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL
Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor | CHICAGO, ILL., MAY 4, 1905 | Vol. XLV.—No. 18

Editorial Notes and Comments

The Honey-Producers' League

Many of those who have become members of this new organization of bee-keepers have added encouraging words when sending in their dues. Some of them read as follows:

I think this scheme of advertising honey is a grand step.—R. S. CHAPIN, of Michigan.

I believe the League is the proper thing, and is going at it in the right way.—E. A. DONEY, of Iowa.

The Honey-Producers' League meets with my hearty approval. I will do what I can to help it along.—J. A. GREEN, of Colorado.

I think the League, if conducted rightly, will be of more benefit to bee-keepers than any other organization yet started.—GEO. E. GOODWIN, of Michigan.

I welcome The Honey-Producers' League with pleasure. I think it is one of the best movements ever made for the apiarists of the United States, as advertising is an absolute necessity if we expect to keep abreast of the times.—C. H. HARLAN, of Minnesota.

It seems to me every person that produces honey to sell should become a member of the League. If the League should raise the price of honey only one cent a pound, or even a half cent, I shall think I made a first-class investment when I became a member of the League. —D. I. WAGAR, of Michigan.

If those interested will fall in line so as to secure enough money to push the advertising, there is no doubt but what great good will result. We know it to be a fact that the masses do not buy honey, because it is not brought to their attention. Other things are pushed so hard—brought to their attention continuously by the various methods of advertising—that honey is crowded to the background and forgotten. Even if the groceryman has a nice line of honey in a very prominent position in his store, sales are not what they should be on account of his customers calling at the store so seldom (where they could see the honey), the majority of orders from groceries being either taken by 'phone or the grocery solicitor, who probably seldom mentions honey. This is especially so in the larger towns and cities.—A. G. WOODMAN, of Michigan.

With such hopeful expressions, it seems that there should be no delay in lengthening the League's membership list. It will take a good deal of money to advertise honey efficiently. If it can not be done on a large enough scale of course the results will not be what they might be if it were done in proportion to the real need to the large number of bee-keepers, and to the enormous quantities of honey to be sold annually in the United States.

But if the selling price of honey could be raised even a half cent per pound, as one member suggests, or if the price can even be kept from declining still lower, the value of the League to bee-keepers, and the wisdom of its creation, will be fully justified. But even if the largest success is not attained, the attempt is worth the making.

The Right Name for Honey

A friend in an eastern city offers me some very good suggestions in regard to the general belief that comb honey is adulterated. He says, in substance, that the general public mean one thing by comb honey while we mean another. The common conception of comb honey is what bee-keepers would term chunk or broken honey, generally kept in pans, the honey running loose among the combs. It is hard to see why this could not be mixed with glucose as well as if the comb were absent. But bee-keepers restrict their idea of comb honey to that in sections. Newspapers are rapidly admitting that honey in *unbroken* combs is necessarily genuine. Instead of calling the mashed-up stuff "honey in the comb," he would call it "comb in the honey." This is well worth thinking about.—"STENOG," in Gleanings in Bee Culture.

There is some weight in the argument, if the premises are correct. But is it true that the public generally considers the term "comb honey" to mean "chunk or broken honey, generally kept in pans, the honey running loose among the combs?" Possibly, in special localities, hardly in general. Take Chicago, for instance. For every pound of such honey found on the market there will be found thousands of pounds of section honey, and the probability is that to the average Chicagoan the term "comb honey" suggests honey in sections. In the broken mixture spoken of, the part that is comb honey is genuine honey, whatever the surrounding liquid may be, and if any special name should be given to the stuff, it should be called "comb honey in liquid honey" rather than "comb in the honey," which would suggest empty comb submerged in honey. In any case, what is needed is to have the truth known.

The Honey-Producers' League and Canada

The following letter from Mr. R. F. Holtermann, of Canada, contains his estimate of the League, and also involves a question:

FRIEND YORK:—I have been much interested in The Honey-Producers' League. It will undertake a line of work for which I have seen much need, and along which I have been trying to do some work. If you can give me the assurance that the organization will work on this side of the line as well as in the United States, you can have my membership fee any time. I hope the bee-keepers will rush in their fees. I have carefully read over the Constitution, and it appears to me it is well thought out, and I can see no place for improvement.

Yours truly, R. F. HOLTERMANN.

In reply, we may say that the organizers of The Honey-Producers' League thought best not to include Canada, believing it would be better for our esteemed northern neighbors to form such a league themselves, if they so desire. If United States bee-keepers succeed in raising all the funds necessary for the honey advertising that should be on this side of the line, they will do well. Then, we believe, there is very little honey passing back and forth between the two countries, on account of the duty imposed upon it. So we United Statesers would hardly care to pay for advertising honey in Canada, and no doubt few of the Canadians would feel like helping to pay advertising bills over here.

We see no good reason why Canadian bee-keepers should not organize similarly to our League, and make it a great success.

Certificate for Inspectors of Apiaries

N. E. France, the Wisconsin State inspector of apiaries, has kindly sent us a copy of a blank which he furnishes to every bee-keeper whose apiary he inspects, also a carbon copy to the Governor with his monthly report. Bees for sale often require such certificate also.

On the back of the certificate, which is about 3¾x5¾ inches in size, are printed the laws of Wisconsin on the appointment of a State inspector of apiaries and his duties, also as to the sale of a diseased apiary, etc. The blank portion reads as follows, excepting the name and address of the inspector at the bottom, which can be printed, or may be signed in each case:

No.——————

Wisconsin State Inspector of Apiaries

Date..

I have this day inspected the apiary of—

Mr..

P. O..

No. of colonies in apiary.............................

Last winter...... { In cellar ....Loss..........
{ Outside ....Loss...........

190 —Honey.... { Lbs. Comb...........................
{ Lbs. Extracted......................

No. of colonies apparently healthy....................

No. colonies diseased.................................

Name of disease.......................................

Date bees to be treated...............................

No. colonies or hives to be burned....................

Subscriber for..

Remarks...

....

....

No Adulterated Comb Foundation, and Why

Referring to the charge by Dr. Wiley that comb foundation is adulterated, Gleanings in Bee Culture says:

> At first we thought we would pay no attention to it, as we did not think there was one bee-keeper in ten thousand who would believe it; but as two of our brother editors have denied that such practice has been going on on the part of foundation makers, it now seems pertinent for us to say that, out of between 300,000 and 400,000 pounds of foundation made annually in the United States, we will guarantee there is scarcely a pound of it adulterated. I say *scarcely*, because foundation makers are buying wax from everywhere, and they might, in spite of their careful inspection, allow a single cake of adulterated wax to get in with the good, with the result that a single sample might show a very slight adulteration. The makers of foundation in this country know that, if they wish to ruin their business, and that right speedily, the quickest and easiest way to do it would be to begin to adulterate their goods. Paraffin and ceresin foundation are something that can be detected by bees and bee-keepers almost instanter. Again, the modern methods of making foundation will show up adulteration in the wax very quickly. Indeed, it is practically impossible to make adulterated foundation on Weed machinery. The reason why we *know* is because we once *tried* making some sheets of wax and paraffin for the dental trade that called for it, and had to give it up as a bad job.

Don't Leave Wax Unwatched on the Stove

Especially to beginners is commended the following by J. A. Green, in Gleanings in Bee Culture:

> When melting beeswax on a stove, especially if there is any water in the vessel in which it is being melted, do not go away and leave it for even a minute. If you must go away, set the wax off the fire until you get back. The fire may be hotter than you think, or something may make you stay away longer than you expected to. A pan of wax boiling over on a hot stove may make a serious blaze. Last year neglect of this precaution cost one bee-keeper in this valley, his dwelling-house, and another a good honey-house with contents, including about a ton of honey.

Miscellaneous News ✣ Items

Freight-Rate on Jacketed Honey-Cans.—From a letter dated April 20, received from General Manager France of the National Association, we take the following:

> FRIEND YORK:—Yesterday, while in Chicago, I secured a fourth-class freight-rating on my 5-gallon jacketed honey-cans. This applies to all railroads in the Western Freight Classification. The cans are bail-handled, flat top, entire can enclosed, and with a 3-inch screw cap underneath. I feel this is another victory for bee-keepers. Now add the help of The Honey-Producers' League, and certainly bee-keepers should be better able to market honey.
>
> I also saw a nice tin shipping-case for comb honey that is no-drip, and when empty will be nice to use in the pantry for holding bakings, etc., as no ants, dust, or other foreign material, can get inside.
>
> In connection with the League's help to bee-keepers, I am planning some showy honey-labels for the National members at cost. They are in three colors, and much like some showy syrup-labels. Marketing is the cry now, and it looks as if the Association and the League will solve that.
>
> The National has just secured another city ordinance victory in Toledo, Ohio. Yours truly, N. E. FRANCE.

* * *

The Honey-Producers' League Incorporated.—Only a little over a month after the League was organized the final incorporation papers were received by the Manager from the Secretary of the State of Illinois, Jas. A. Rose. The date of organization was March 15—date of incorporation, April 21, 1905.

Mr. N. E. France, who had been selected as a member of the Executive Board, decided that he had already "too many irons in the fire," and so could not serve. In order that the incorporation might be completed as soon as possible, the remaining members of the Board selected, in place of Mr. France, Mr. Robt. A. Holekamp, of Missouri, who did so much toward getting the Foul Brood Bill passed in that State recently.

* * *

The Fourth Annual Report of the Illinois State Bee-Keepers' Association is now ready for mailing. Any one can have a copy of it by sending 15 cents in stamps to Jas. A. Stone, Rt. 4, Springfield, Ill., the Secretary of the Association. Besides considerable other interesting matter, it contains a report of the last Illinois State convention, also a full report of the meeting of the Chicago-Northwestern Association last fall, and a number of pages on "Foul Brood and Other Diseases of Bees," by N. E. France, Wisconsin's popular foul-brood inspector. The Report contains 192 pages.

* * *

A Tariff on Cuban Honey.—The Southwestern Ohio and Hamilton County Bee-Keepers' Association, through its Secretary, Henry Reddert, sends us the following on the tariff on Cuban honey:

> The recent agitation of the increase of tariff on Cuban comb honey is quite spirited, judging by the favorable replies this Association has received.
>
> We learn from a responsible source that all foreign honey is taxed by this Government 20 cents per gallon, at 12 pounds to the gallon, no distinction made as to comb honey; but on all honey coming from Cuba a rebate is allowed of 20 percent off the tariff amount, leaving the tariff rate on Cuban honey 16 cents per gallon. All honey-producers know it requires more honey to produce comb honey than it does to produce extracted honey, hence comb honey is rated too low.
>
> At the time the tariff rate on honey was fixed no doubt there was little if any comb honey on the market, hence the single rate. We understand it is rumored that a revision of the tariff is to be undertaken at the next session of Congress; if so, then will be the time to bring a proper Bill regulating the tariff as to each kind of honey, comb and extracted.
>
> Mr. Sereno F. Payne, the chairman of the "Ways and Means Committee," we judge, is the man to whom this Bill should be presented; however, this is only a suggestion. If the Executive Committee of the National Bee-Keepers' Association knows of a better way to bring it before Congress, it is their liberty to do so, but we must not delay it, as we have but a limited time before the next session of Congress in which to do this work.
>
> We suppose it would be a good idea to discuss this question at the next convention of the National Bee-Keepers' Association.
>
> Very respectfully,
> S. W. OHIO AND HAMILTON CO. BEE-KEEPERS' ASSOCIATION.
> *Per* HENRY REDDERT, *Sec.*

We think the suggestion a good one, that this subject be considered at the next meeting of the National, in San Antonio. Perhaps Secretary Hutchinson will request some one to be prepared to introduce it for discussion.

* * *

The A. I. Root Co.—It was our privilege to visit The A. I. Root Co., at Medina, Ohio, the latter part of March, for about 6 hours. But that was too short a time to take in all there is to be seen. It had been about 10 years since last we visited them, and we were astounded to see what a wonderful transformation and development had taken place during the decade.

Mr. A. I. Root began, some 40 years ago, in a little room above a jewelry store with a one-foot-power buzz-saw, but that small beginning has expanded into a big plant that covers acres and acres of ground. Massive brick buildings and warehouses 2 and 3 stories high, protected by the latest fire-apparatus, peopled with skilled workmen, and supplied with the latest automatic machinery, mammoth lumber yards—all are in evidence over the grounds. A 400-horse-power steam-plant, a 100-horse-power electric plant, a water-works plant, an organized factory fire-fighting crew, a pay-roll of $2000 a week, daily shipments of goods by the car-load to all parts of the world, are also prominent features of "The Home of the Honey-Bees."

Immense lumber-sheds, capable of holding at one time anywhere from $50,000 to $75,000 worth of lumber, have been erected so that timber of the right season and dryness may be used for the exacting demands of bee-hive work.

In order that The A. I. Root Co. might perfect its already large equipment, and thus serve its customers better, the capital stock was increased in 1904 to $300,000, all paid up.

Few people can realize what it means to build up and conduct a business of such proportions, and especially on the results of the work of so small a creature as the honey-bee.

On the first page we give some pictures of this great factory and the officers of the company responsible for its management.

Mr. A. I. Root is getting somewhat along in years, and yet he tries to keep a watchful eye on all that is being done around him. True, he devotes a good deal of his time in the spring and summer to the raising of "garden sass," but he is ever on the lookout that things are kept straight. And then he has two sons and two sons-in-law to "see to," besides their increasing families, so it is no wonder that he is kept "on the trot" about the place pretty much of the time.

Ernest R. Root, as nearly all our readers know, ably edits the bee-department of Gleanings, and is as royal a man and friend as one would wish to know.

John T. Calvert is the hustling business manager of the concern. He knows how to "make a good bargain," and also sees to it that his firm's share of the apiarian trade is secured.

Arthur L. Boyden is not only secretary of the company, but also looks after the advertising in Gleanings, as well as that done elsewhere by the firm. He is affable and kindly, also a good entertainer, for we were invited to dine at his hospitable board while there.

We must not omit the mention of W. P. Root, who conducts, under the *nom de plume* of "Stenog," a department in Gleanings known as "Picking from Our Neighbors' Fields." "W. P.," as he is also familiarly known, has been with the Root Co.—well, a quarter of a century, we should say. But he seems to "renew his youth" as the years pass on. Really, he seems to look younger now than when we first saw him 10 years ago. He is what might be called "a jack at all trades" and master of all. What he can't do, from typesetting up to proof-reading and translating a dozen or so of both dead and living languages into modern English, is hardly worth mentioning. The word "versatile" best expresses him. He's "all right." Nothing at all the "matter with him." (We didn't ask him, but would be willing to believe that middle initial "P." in his name stands for "Prohibitionist.")

We were not in Medina long enough to take in the whole of The A. I. Root Co.'s extensive plant and business, but we saw enough to convince us that they are doing business—they know what they are there for without being told. They have built up a great institution by energy, industry, and push—and the end is not yet.

Contributed Special Articles

Foul Brood Law—Early Honey-Flora

BY PROF. A. J. COOK

TAKE the country over and foul brood is one of the three serious evils that go to form the most menacing trio that stands in the way of successful bee-keeping. As I size up the situation, these worst enemies are, Uncertain Markets, Winter Losses, and Foul Brood. I believe foul brood is the equal of either of the others in the heavy hand that it lays in the way of our progress. Yet we know that, like the others, we can face it and down it if we only fashion and use the right weapons. These weapons are intelligence and action.

Mr. James Bryce, the great statesman and writer of England, is very brainy and possessed of a most catholic spirit. He knows a whole lot, and his judgments are as kindly as they are reliable and accurate. His great work, "The American Commonwealth," should be read by every citizen of our country. I believe he measures as with a correct top-line, and that all his criticisms may well lead us to pause and ponder. After a lapse of several years he has visited us again, and, as before, he pens a graphic picture. He calls attention to one of our most serious perils. This is municipal corruption. That word "graft," as now used, like the social evil, may well make us shudder for what is, and tremble for what may be. Honesty, like purity, is a transcendent virtue, and it behooves us all to magnify its importance, and we should begin with our little ones as soon as they begin to prattle.

I am led to these remarks from a letter received from one of our most respected bee-keepers, who uses this same word "graft" regarding one of our Southern California bee-inspectors. I know nothing of the merits of the case in question; but I do know what is required, and what we should and must demand.

Our California law, thanks to Mr. J. M. Hambaugh more than to any other one man, is well-nigh perfect. If it does not give good results it is because the bee-keepers themselves are asleep to their duty and privilege.

The good points of our law are: It makes the supervisors appoint upon the petition and recommendation of the bee-keepers themselves. It pays good wages—$4.00 per day—which ought, and will, command ability, honesty and energy—a most-needed trio. It gives the inspector power to exterminate the disease wherever found.

It is now up to the bee-keepers to nominate the right man—such men as the author of our Bill. They must know that he is a student, and will keep informed as to the very latest and best known regarding the nature and cure of this and kindred diseases. They must be equally certain of his absolute integrity, and must know him to be most thorough and energetic.

The inspector must be fired with enthusiasm in two directions. He must be determined to find all cases of the disease in his district, and must act with the keenest energy to stamp out the disease wherever it has gained a foot-hold. He must be just as eager to save expense to the county. He can often plan his work so as to make a horse unnecessary for days at a time, and thus save both hire and keep. He can often enlist the aid of the bee-keepers themselves, and thus accomplish much more in a given time, and at the same time the bee-keeper is gaining just the knowledge and experience that every capable bee-keeper should possess. By working in a locality continuously till apiaries of the region are all examined, and so far as necessary treated, he will save a vast expense. He will not object to offered entertainment, or to permit any bee-keeper to transport himself and his equipment to the next apiary, as this will save expense to the county, and will reduce his bills, and make his work more popular. Nor will such courtesies on the part of the bee-keeper be really an imposition. He will often receive rich pleasure and very helpful instruction in the company of the inspector; indeed, it ought to be worth more to him than the cost of entertainment and other courtesies rendered. He will also gain in the fact that the work will not be so likely to be criticised and cut short if the expense account is held down. We are all interested that the work shall be thoroughly done, and that no foul-broody colony be overlooked.

There is just one more duty that the bee-keepers are bound to keep in mind. If they find that they made a mistake, and recommended the wrong man for appointment—one who is not competent, one who does not watch carefully to save to the county, one who is not full of energy and telling enthusiasm in his work—then it is their duty to petition, yes, demand the supervisors or appointing power to remove the incumbent, and replace him with one competent for the duties and demands of the position.

With such an admirable law as we now have, we should reach almost complete success, to the saving of untold thousands of dollars to our bee-keepers. Let us do our part, that the best possible results may be secured. I believe other States can do no better than to copy substantially our California law. But when we have the statute we must not think our work is all done. We must insist that we have the right man, and that he works with the best skill and energy, not only in extirpating the dread malady, but also in whittling expenses to the very minimum.

EARLY FLORA IN CALIFORNIA.

In this charming climate of Southern California we have two reasons to rejoice in the abundance of rain, warmth and sunshine that have gladdened our hearts and landscape the present winter. They not only offer almost certain promise of abundant prosperity along all agricultural lines, but they have carpeted the fields and roadsides with a wealth of green and bloom that is a delight to behold. I have, in all my 11 years in this place, never seen so many flowers at this early date as now gladden the vision of any one who strolls forth over the plains and hills for air and sunshine.

The phacelias are out, and swarm with bees, as do the orange and lemon trees, and the great live-oaks which are now in full bloom. The white and black sage are now pushing out new growth, and will be early in bloom to attract the bees, and swell the profits of the bee-keeper. The gilias are thickly spread, and are also attractive to all nectar-loving insects. Some of the gilias bear blue pollen, and it is not uncommon to see bees with their full loads of this blue proteid which they are carrying for bread to the hive.

At present, the whole air is perfumed with the scent from the citrus bloom. No doubt but we would get much orange honey except that at this early season the bees are few, and thus the harvest of orange honey is never great.

Los Angeles Co., Calif., April 3.

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Using the Langstroth Hive Advantageously

BY LOUIS H. SCHOLL

MUCH larger hives are necessary in the South. There are many advantages for using them, but not so many bee-keepers know it. The trouble is that the Langstroth hive, which is almost universally used, is too large in one way and too small in another. This statement might cause many to say that I was condemning the Langstroth hive, or that I am not showing proper respect to its inventor. Not so, however, but I do say that the best results can not be obtained with the regular Langstroth hive in a locality with the honey-flows and the other existing conditions as given in my previous articles.

THE 10-FRAME THE SOUTHERN STANDARD.

The 10-frame Langstroth is mostly used in the Southern localities here, but even it is not large enough—at other times of the season, again, it is too large. That is the objection I have to this hive. A satisfactory hive must be so constructed that it can be enlarged or contracted at will, and this can hardly be done with the Langstroth. The result is that many valuable manipulations that would be worth much to the bee-keeper in critical times are unknown, or even unthought of, by the majority of the users of this hive.

ENLARGING THE LANGSTROTH HIVE.

I have always been an advocate of large hives—large hives at the right time; large hives in the proper shape, other conditions being equal, mean rousing colonies of bees. They prevent swarming; and a large crop of surplus is the result. The 10 frame hive as commonly used, with only a single brood-chamber, is not quite large enough for the best results in brood-rearing in the spring. For this reason I enlarge the brood-nest by a super of shallow combs above. Some will say that another hive-body could be added, but that would be adding too much room for the majority of the colonies. In such hives the brood is generally scattered too much, while in the former it is all in a compact form. If the colony is an extra-strong one an additional super can be added, and that without the danger of giving too much room at a time. By using hives so, and breeding the bees in accordance therewith, the problem of swarming will be reduced to a minimum.

PROVIDES ADDITIONAL BREEDING ROOM.

The queen has used the shallow combs of the super for egg laying, the brood has been hatching out, and the honey that has been coming in in excess of the amount required by the bees, has been stored in place of it.

AN EXTRA SUPER OF HONEY.

In this way an extra amount of surplus honey is obtained. All honey that is not used by the colony goes into the shallow extracting-super, whereas it would have to go into the brood-chamber otherwise, or perhaps not be gathered at all. If it is stored in the brood-chamber it clogs the brood-nest and crowds out the queen. It also places honey along the top-bars above which the bees are loth to store during the main flow when the comb-honey supers are given. The shallow extracting-super prevents this. Its use brings the colonies in a Langstroth brood-chamber to the best condition by the beginning of the honey-flow, for the brood-nest extends up to the top-bars of the chamber. There is no honey along the top-bars. The colony is in an ideal shape for the comb-honey supers.

CONTRACTION DURING THE HONEY-FLOW.

Now I do not mean to contract the brood-chamber to 4 or 6 frames, and place a lot of dummies in the place of those taken out. Such practice has always seemed like a "dummy" to me, and I never liked it, although I tried it repeatedly.

When the time comes for putting on the comb-honey supers, the extracting super, now filled or nearly so, is simply raised up and placed above the empty super put on. This places the colony in a shape by which immediate storing in the comb-honey super is obtained if the honey-flow is on. The bees take possession of the supers at once, and there is no need of bait sections and other methods for coaxing them up.

The extracting-super is left on until the first super given is partly filled. Then, when the second super is added underneath it, the extracting-super is removed to be extracted.

THE ADVANTAGES THAT ARE GAINED.

The advantages that are obtained by using a shallow extracting-super as outlined can be summarized about as follows:

First, it enlarges the hives. This means prevention of swarming, rousing the colonies of bees, and large surplus crops.

Second, extra storing-room is provided for honey not needed by the bees. It prevents the clogging of the brood-nest, and an extra amount of surplus is obtained.

Third, the brood-chamber is in the best condition for the comb-honey supers when the main flow comes. There is no sealed honey along the top-bars above which the bees are loth to store, but the brood extends up to them.

Fourth, contraction of the right kind can be practiced with great advantage and without extra trouble. Placing the extracting-super above causes better work in the comb-honey supers, and the extracted honey is ripened better while left on. In this way the bees are used to working in the supers, and the trouble about them not entering the comb-honey supers is done away with.

Brazos Co., Tex.

Convention Proceedings

The Illinois State Convention

The 14th annual session of the Illinois State Bee-Keepers' Association was held in Springfield, Nov. 15 and 16, 1904. The proceedings of that meeting are published in a pamphlet, as mentioned on page 324 of this number of the American Bee Journal, from which we take the following:

CO-OPERATION AMONG BEE-KEEPERS

Your invitation to me to attend our annual State Bee-Keepers' meeting and deliver an address has been duly received, and I would gladly comply with your request were it not that the date conflicts with that of another congress—the Upper Mississippi River Improvement Association—which is of very great interest to the cities along the big river, and for which I am delegated by our city. I trust that, in view of the importance of the matter, our bee-keepers will excuse my absence.

I believe that the most important matter before the bee-keepers of the country at the present time is the matter of coöperation. The methods of bee-culture have been so improved in the past 50 years as to make the production of honey an easy matter for all practical men. The old fogy bee-keeper and the "gum" have been relegated to the background. The moth-trap has been put away with the spinning-wheel of our grandmothers, and neither of them is brought to light, except as a relic of the past. The essential questions today are: How to market our honey, and how to protect ourselves against damage, either through the contagious disease, foul brood, or through the ignorance or dishonesty of those who oppose our interests? The comb-honey manufacture yarns, the spraying of fruit-trees in bloom, the prejudice against bees because of the untrue accusation that bees damage flowers or injure sound fruit — all these and many others are to be warred against. To do it safely, we must unite.

We hear on every side of the success of the great trusts which are formed in the manufacture of everything, and of the enormous profits derived by coöperation. The truth is, that association is the key-note to success today. I dare say that of those who will hear this paper read, there are very few, if any, who do not belong to some association, for profit or comfort. The life insurance and fire insurance companies are nothing but trusts for our benefit. The secret societies, for mutual help—Masons, Odd Fellows, etc., are all in the direction of coöperation. Our bee associations, no matter how insignificant and weak they may be, are all evidences of the need of association for mutual information, and ultimate increased comfort.

Some of our State associations have already secured some very positive benefits from association. A number of States have efficient foul-brood laws and foul-brood inspectors, who help keep down this disease, which is really the only disease that nature has put in our way. As bees increase in numbers throughout the country, the danger of epidemics increases, and therefore the precautions against all possibilities of disease should increase. When bee-keepers lived 25 miles apart, and bees existed only in the forests, an epidemic was soon stopped, like a fire without fuel, by want of something to feed on. But since bees are becoming one of the institutions of the farm or of the suburban garden, there is an increase of risk which must be warded off.

I notice the same danger in other lines. A small vineyard runs less risk of black-rot than a large one. A farm yard containing a couple pigs is in less danger from hog cholera than one containing a couple hundred. So, as we become more and more numerous there is more and more need of coöperation, to defend ourselves by mutual understanding and instruction. It is necessary to obtain laws in each State regulating the control of foul brood, and sustaining the honest producer against the adulterator who tries to sell a manufactured product as a product of the farm.

There is also need to advertise our business so as to help the sales of a healthy and pure product; there is need of placing before the masses a very plain statement showing that the canards concerning the alleged manufacture of comb honey by machinery are all a fake. For these purposes, and for many others which do not come to my mind now, and also for purposes of which we have no present adequate idea, it is absolutely necessary that we should unite—coöperate.

The National Association, which a few years ago numbered only as many members as met together each year at one selected spot in the United States, now numbers something over two thousand members. Although this is a great increase, it is nothing compared to the possibilities of coöperation, whenever we convince our brother bee-keepers that it is to their interest to unite for the common good. Instead of two thousand, we must have twenty thousand members. Each State must form a nucleus, sending its delegates to the meetings of the National congress, and the Association must sooner or later send its ramifications to every spot where bees are kept, in the length and breadth of the land. When this is done, our bee-keepers will no longer go to their town groceries and ask them what prices they pay for honey, but each will be posted from headquarters, and will go to the retailer with a statement something like this:

"Our sales headquarters state that the crop is short in such and such States; that the honey is expected to be in demand in such or such localities; and that the prices, considering prices of other sweets, may be expected to range about so much. Therefore I have placed the following prices on my honey."

Let no one think that this is impossible. An impossible thing is to get a fancy price for your product, but there is not the shadow of a doubt that a plain understanding as to the resources and the demand will bring about the securing of fairly profitable prices. No one can produce anything at cost, or below cost, and keep it up. At present we have many friends who produce honey and sell it at less than the cost of production, because they are working individually without any information as to the value of their product. We may expect paying prices for our crop, if, when we put it on the market, we know just what to expect, and if we feel that there is a distributing point from which our surplus may be handled at the lowest possible cost.

I know that some of our members may consider this as romance, but let me tell them that this romance is based on facts. We see thousands of plain evidences that an understanding of conditions and an increase of facilities for distribution is productive of great benefits to all. The cost of coöperation is insignificant, compared with the results. The only thing that may discourage some of those who hope for success is that large coöperative combines are not built up in one day. We must unite and *stay* united until we succeed.

It is not only in progressive America that the ideas of union are taking root. Even in our pursuit of bee-culture, we see this principle taking the lead a little more every day. The bee-papers of nearly all foreign countries are discussing association and coöperation. In Belgium, in France, there are some tangible steps taken. The October number of the Italian "L'Apicoltore" contains an address from Mr. Caponi, before the third National Congress of Bee-Keepers, on "Protection to the Bee-Industry," in which he urges his brother bee-keepers to unite, as "no great results can be obtained if we do not act as '*viribus unitis*'—united men."

The United States of America are a living example of what can be done by *"united men."* C. P. DADANT.

Our Sister Bee-Keepers

OUR TOIL DOTH SWEETEN OTHERS

Conducted by EMMA M. WILSON, Marengo, Ill.

A Lady President of the British Association

The Baroness Burdett-Coutts has been unanimously re-elected president of the British Bee-Keepers' Association for 1905, a position she has held for some time. Who says bee-keepers do not honor their women?

A Busy Sister Bee-Keeper

The letter from Prof. Parrott, which appears in this number, when sent by Miss F. E. Wheeler, was accompanied by a delightful private note, and one part of it will appeal to so many of the busy sisters that Miss Wheeler will just *have to* forgive its introduction here:

DEAR MISS WILSON:—My, but I'm busy! The bees are pretty quiet, but we will get them out soon now. Snow is gone, but we have high, raw, chilly winds. I will start two incubators to-morrow morning, sending off a White Holland tom, receiving 10 from Indiana for myself, bossing my man's house-cleaning and mother's dress-making. Can you beat that in a day's work, and add correspondence and some work on an article? FRANCES E. WHEELER

Honey as a Health-Food

Honey is a medicament which can be used for various purposes. Dyspeptics whose real treatment consists in a strict food regimen, should use it as dessert in place of cakes, fruits and nuts, such as almonds. Honey has still one more advantage, which is that it acts as a mild laxative, and that is a valuable property for habitual constipation which gives rise to many disorders. Without doubt it is to this double action that honey owes its reputation.

As a narcotic it may be recommended for sleeplessness. Two spoonfuls of honey in a glass of water will suffice to induce sound sleep all night. It is probable that honey in such cases serves to displace indigestible foods, which, retained in the stomach, disturb the nightly rest.

That is not all. Honey mixed with water serves as an excellent gargle, and has the merit of being very agreeable to the taste, either swallowed by accident or on purpose, for honey mingled with water is delicious. And the ancient Gauls thought such a beverage was a drink of the gods, and termed it "hydromel."—Medical Talk.

That New York City Park Bee-Keeper Contest

Miss Haggerty, the lady who was so successful in passing the examination for the position of apiarist at Bronx Park, New York City, and who was so unsuccessful in obtaining the position, writes:

MY DEAR MISS WILSON:—The American Bee Journal has been sent me. I thank you very much for your kind notice, and wish to say you are right in surmising that politics, and not the fact that I am a woman, stood in the way of a position. This fact did help Mr. O'Mara, inasmuch as when Commissioner Schrader filled the vacancy, he worded his request for a "male apiarist." This barred me out, and made room for the fourth on the list, as only three were to be considered.

As to the examination, all credit of my passing should be given to my excellent teacher, Mr. W. L. Coggshall.

Very respectfully, Emma V. Haggerty.

Of course there is some satisfaction at having been able to diagnose the situation so correctly; but our good friend, Mr. Coggshall, will no doubt protest against taking so large a share of the credit for passing the examination.

Honey Paste for the Teeth

Eight ounces of precipitated chalk, 4 ounces of powdered castile soap, 4 ounces of powdered orris root, 40 drops of oil of sassafras, 80 drops of oil of bay, and honey enough to form a paste.—Mme. Qui Vive, in the Chicago Record-Herald.

Bees and Fruit-Puncturing

As a further contribution in the case of the bees on trial, Miss Frances E. Wheeler sends the following letter written by the entomologist of the New York Agricultural Experiment Station:

Miss Frances E. Wheeler:—I have read your letter with a good deal of interest, and understand your position as I did not before when your observations were given me second-hand. The prevailing opinion is, of course, that bees are not able of themselves to puncture the skin of fruits, but as regards your suggestions that they may deliberately sting the fruit as the first step in feeding, I can only say that I have had no observations to sustain such a theory. I fully appreciate the stinging abilities of these insects, and can understand that if they so willed they could puncture the fruit in the manner described. This is a point that could easily be determined, and I know of no better place where suitable observations could be made than in your own orchard. If this year the bees frequent the fruit as they did last year, I should consider it a great courtesy if you would call my attention to the same, that I may make observations to settle this point.

Thanking you for your interest in this matter, I am,

Yours truly, P. J. Parrott,
March 7, 1905. *Entomologist.*

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

LIGHT-WEIGHT SECTIONS OF HONEY.

So a grocer of 10 years' experience thinks the swindle of light-weight sections is responsible for much of the falling off in consumption. Hit the mark that time. Not necessary to suppose that grocers generally lie about the weight, or that purchasers generally believe sections weigh a pound when they do not. But when a man buys a so-called pound section, and pays for 12 ounces the price that should have sufficed for a pound, he will ruefully kick himself about it afterward. Among other things he will tell himself then that it didn't weigh more than *10* ounces. And it will be quite a while before he buys any more. Page 229.

SPRING AND FALL PRICES OF BEES.

On the price of a colony of bees, fall and spring, 6 of the 29 experts do not try to answer the question as it is given. Among the remaining 23 there are obvious causes of decided scatteration. Some live where farm sales of neglected bees are common, with resulting depression of prices. Some live where the winter problem is nothing, with the result that the two prices are the same, or nearly so.

We'll take $5.00 in spring and $4.00 in fall as the comparison figures. Three name these sums exactly and nothing else. Five more give answers that agree thereto, but with more or less of "frills" attached. So these prices have the assent of over one-third of the respondents. Three more name the same price in the spring but cheaper in the fall. Nine name them cheaper both fall and spring—lowest in Kentucky and Texas, where they are sometimes $2.00 or lower. Two name them higher both fall and spring. If you glance over and compare these ballots you will most likely conclude that (by popular suffrage) the comparison figures are at least a shaving too high. Page 245.

EXTRACTED-HONEY EXHIBITS—BEESWAX.

So Utah exhibited its best honey in great 100-pound glasses with the result that it didn't seem to be very white. The light amber honey in one-pound glasses looked whiter than the best honey did. Reminder for future exhibitors.

One of the things for us to find out when we get around to it is about the wide abnormal variations of beeswax. These affect both color and odor; and when we consider the world as a whole, they are by no means rare, it seems. These peculiar waxes seem local. Whether they really are so or not is part of the problem. One might surmise that some local species of plant or tree serves as the real cause—were it not that most of our numerous divergences in bee-pasture seem to count nothing except as to the honey. A peculiar race or species of bee is without much doubt liable to have its own peculiar sort of wax. These peculiarities cropped out in the wax-exhibits at St. Louis. Nicaragua had a black, wild beeswax. Mexico showed a chocolate-colored wax. Madagascar showed a yellow wax with a very pronounced odor. Although none seems to have been at St. Louis, Jamaica has a cherry-red wax with a very penetrating fragrance. Yet, as a general proposition, we are in the habit of considering that blacks, Italians and Cyprians all make the same wax—and all the same whether from clover or buckwheat, willow, aster or polygonum. Somebody rob bumble-bees' nests enough to get a visible cake of wax from them. That would show individualities, I'm pretty sure. Page 199.

A PUBLIC HONEY MARKET.

Nice to have a 2-days' public honey market every fall, as in the Swiss city of Neuchatel. But, considering our prices, 2 cents a pound to pay for selling extracted honey would kind o' strike us in the neighborhood of the solar plexus. Taken out of their figures (from 16 cents up to 20) we would stand the blow. Page 245.

INCORPORATION OF THE NATIONAL.

Sixteen of the experts favor the incorporation of the National, 7 oppose it, and three dodge the question. Page 200.

HEAVY LOSS OF BEES IN 1903–04.

We know the winter of 1903–04 was a bad winter on bees; but Canada seems to have caught it worse than the rest of us, according to the figures on page 205. To lose 113,000 colonies of bees out of a total of 190,000 is certainly a startling loss. But such sweeping losses often make some desirable returns. The bee-keeper that harbors foul brood—won't take pains to cure it, and yet won't quit the business and let the territory become clean, is sometimes put out of commission by an extra-severe winter.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Bee-Hives Made of Cedar and Redwood

I have seen offered for sale bee-hives made of Washington cedar and California redwood. Are they any good? California.

Answer.—I have had no personal experience with them, but I think some have reported favorably of these woods.

Sections Protected All Around—Wide Frames

I am sending you under separate cover "top and bottom" of a section taken from one of my T supers. I would not want to say that all sections from my T supers are so stained. In my travels I occasionally come across a man who wants his sections protected all around while in the hive. At our bee-keepers' meeting a year ago there was not one who was in favor of it. I would like to know whether you think it would be *desirable* to have the tops of sections protected. G. M. Doolittle, a few bee-keepers near Syracuse and myself, seem to be all the "old fogies" who stick to wide frames. What is the matter with us? New York.

Answer.—Your samples have been examined and discussed by myself and assistant with much interest. We have had sections as badly daubed, but not many. When honey is yielding nicely, bees are not much inclined to propolize. They will glue cracks and angles to some extent but that is all. Late in the season, at least in this locality, they will plaster glue on plain surfaces, and if a T super of sections is left on for some time after the harvest closes, the bees seem to have it on their consciences to decorate the tops with propolis over the entire surface. They do not do this with wide frames—cannot—they can only get at the edges. So if a T super and a super of wide frames, side by side, be left on some time after the harvest, the sections in the wide frame will be much the cleaner. While the harvest is on, the difference is the other way. We take on thousands of sections in T supers that scarcely need any scraping. With wide frames on at the same time, the bees think it the right thing to glue the cracks, and it is wonderful how far they can crowd in the glue between the top-bars of wide frames. So on the whole there is probably less trouble with T supers than with wide frames in the matter of gluing.

After what I have said, you will not be surprised that my answer to your question is that I do not think it desirable to have the tops of sections protected, because the protection, while efficacious at the central part, invites propolis at the edges.

In the samples sent I note that you have the locked corner of the section at the top; most likely an exceptional case, as a section looks better the other side up. I note also that on the bottom there is little glue, nine-tenths or more of the material being pure wax; in this particular case apparently an unprofitable degree of crowding.

It is nothing very strange that some adhere to wide frames. I have a very kindly remembrance of the fine crops of honey I secured with them. Given a complete outfit of any kind of surplus arrangements, and a man is not warranted in changing to something a little better; it should be *much* better. There's the expense of the change. Then he's used to the old, and the new is troublesome. I think some who have tried T supers have failed to get the right benefit from not knowing how to use them. While looking at the daubed pieces you sent, my assistant said, "Sections like that can be scraped so as to be nice, and I'd rather have the trouble of scraping, if it was necessary, than to have the extra trouble of handling the wide frames."

Transferring and Hives—Clearness in Answers

1. I notice when beginners ask about transferring bees from box-hives, you quite frequently advise them to wait until the colony swarms, and then 21 days after that do something. You do not seem to take into consideration the fact that the bees may not swarm. It would be too bad to advise a beginner to wait until the bees swarm, and then they don't swarm until the second year, when he wants to transfer them before the first season. I have often thought about this when reading some of your answers.

2. Also, one questioner asked as to the value of the Danzenbaker hive for comb honey, and you told him you preferred the "dovetailed." Perhaps you forgot that the Danzenbaker hive is also a dovetailed hive, the word "dovetailed" referring to the way the corners are made. So they are both dovetailed hives. I do not know how to distinguish them unless you should say that you prefer the "regular Langstroth dovetailed" hive. Pretty near all the hives made now are "dovetailed," as you know.

I am simply after clearness in your answers, which might be confusing to a beginner if left as you give them sometimes.

A READER.

ANSWERS.—1. Your exception is well taken. At the very least, something should be said as to possibilities. The great probability is that the colony *will* swarm. In case it does not swarm, the probability is that in most cases it does not swarm because the season is so poor that it can not afford to swarm, in which case the advice may remain good, "Wait till the colony swarms," even if you have to wait till the next year. Especially is this true because in most cases the inquirer is a beginner who will do well not to tinker too much with bees in a poor season. After all this is said, there may be cases of a different character. A colony may be so little inclined to swarm that it may go through a good season without swarming, especially if it be in a large hive.

Suppose, then, we put the answer in something like this form: Wait till the colony swarms, hive the swarm in your movable-frame hive, setting it on the old stand, and putting the old hive on a new stand. Twenty-one days later drum the bees out of the old hive, put them in a new one, leaving it on the same stand. That will give you 2 colonies. You may, however, prefer not to have any increase; in that case hive the swarm as before, putting it on the old stand with the old hive close beside it, and 21 days later drum out the bees and give them to the swarm. In case the bees do not swarm until 2 or 3 weeks after other colonies are swarming, and the colony in question seems in a prosperous condition, you may take the matter into your own hands and transfer in the old way in the manner directed for transferring in your book of instruction.

2. Strictly speaking, there is no such a thing as a dovetailed hive; yet, by common consent, the manner of locking the corners of a hive together now in general use is called dovetailing, and that use of the word is likely to continue.

Wm. McEvoy is a Canadian, not an American. True, he lives in America, but custom makes the word "American" apply not to every one who lives in America, but only to those who live in the United States.

The Danzenbaker hive is not a dovetailed hive. True, its corners are dovetailed just as much as those of a dovetailed hive, but the custom of years makes the name "dovetailed hive" apply not to every hive with dovetailed corners, but only to those containing frames 17⅝x9⅛. There may be a certain inconsistency in this, just as there is in saying that a Canadian is not an American, but established custom controls, and any other understanding of the name "dovetailed hive" would throw out of gear the catalogs and bee-literature in general. A beginner may be confused, but instead of saying to him every time "regular Langstroth dovetailed hive" (which to many beginners would need further explanation), it may be just as well to use the concise form, and let him learn what "dovetailed hive" means, just as it is well to let him learn what "American" means.

Please don't understand from this that I take any exception to your strictures. It would take a whole lot of italics and capitals to let you know how heartily I thank you for what you have said, and if you will only do so some more I'm sure it will be helpful all around.

The Rietsche Press—Making Foundation

1. Would it pay to have a Rietsche press for 100 colonies (I use shallow extracting-frames and sections on each colony), or would it pay to sell the wax and buy foundation?

2. Will the same press make different thicknesses of foundation?

3. How much could one make in 10 hours, and will each sheet have to be trimmed by hand?

4. Please tell your readers all you know about the Rietsche press.

5. What size and shape pans are best to mould beeswax in for market?

OREGON.

ANSWERS.—1. I doubt that you could easily make foundation with a Rietsche press that would be satisfactory for section honey. For brood-frames you can make foundation with it that would be entirely satisfactory. Whether it would be advisable to make or buy depends upon circumstances. If you are somewhat at leisure part of the year, it might pay to buy a press, especially as the cost is not very much.

2. Yes, but as before said, you can hardly make it light enough for surplus foundation.

3. I must refer this question to Mr. Getaz, who doubtless answers it in his circulars, or will give the information privately on request.

4. I know nothing about it from personal experience. Mr. Getaz, who makes the machines, is a man in whom I have much confidence. He is the first, I think, to make any serious effort to introduce them in this country, but a large number of Rietsche presses—I think something like 20,000—are in use in Europe. Pretty good proof that they give good satisfaction there; but it is also true that it is not so easy in Europe to be sure of getting a pure article when you buy foundation.

5. That's a matter chiefly of your own convenience; only it should be a vessel that is at least a little flaring, so the wax will easily leave the vessel when cold.

Reports and Experiences

Bees Wintered Well

Bees have wintered well here. I wintered 20 colonies outdoors and over 100 in the cellar without loss, except from failure of queens and a few small queen-rearing nuclei that ran short of honey. The hives outside were covered with snow during the coldest of the weather.

J. L. STRONG.

Page Co., Iowa, March 29.

Clipping Queens—Water for Bees—Ant-Proof Bee-House

I have just finished clipping my queens. I clipped 57, and will tell how I did it. I made a wire-trap, winding small wire around a flat wedge-shaped piece of wood. When the wood is removed it is just big enough for the queen, and is cone-shape, but flat at the bottom. It is nearly 2 inches wide. I open the hive and when I find the queen I set the trap over her, and as soon as she runs up in the small end I put my thumb on the bottom. In clipping I

Place Your Orders Now.

ITALIAN QUEENS

EITHER GOLDEN OR HONEY QUEENS

Our Goldens will come up to any other Golden Strain. Our Honey Queens are what some term "Red Clover Queens." We always call them Honey Queens.

Before July 1.	1	6	12
Untested	$1.00	$ 5.00	$ 9.00
Warranted Tested	1.25	7.00	13 00
Tested	1.50		
Select Tested	2.00		
Breeders from $5 up.	1	6	12
2-frame Nucleus (no Queen).	2.50	14.00	25.00

When Queens are wanted with Nuclei add price of any Queen wanted. We guarantee safe arrival of all Queens and Nuclei. Our breeders may be returned after 30 days, if satisfaction is not given. Cash must come with all orders. Orders are booked and filled in rotation. We book orders for next season. Safe arrival guaranteed of all stock. We ask a trial order.

D. J. BLOCHER PEARL CITY, ILL.

☞ Do not send personal checks unless you add 10 cents for collection. 16Etf

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— ITALIAN —

Bees, Queens and Nuclei

Choice home-bred and imported stock. All queens reared in full colonies.

One untested queen	$1.10
One tested queen	1.50
One select tested queen	1.65
One breeding queen	2.75
One comb nucleus (no queen)	1.40

Untested ready in May; all others ready now from last season's rearing.

Safe arrival guaranteed.

For prices on quantities and description of each grade of Queens, send for free price-list. J. L. STRONG.

204 East Logan Street, CLARINDA, IOWA.

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"BEST OF ALL"

That's what users say about the great

PRAIRIE STATE

Incubators and Brooders

Our illustrated catalog tells why they are best. It's *free*. Write.

Prairie State Incubator Co., Box 854, Homer City, Pa.

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Lewis' Goods at Factory Prices.

Root's Smokers and Extractors, Dadant's Comb Foundation, Bingham Smokers.

Dovetailed hives with the famous COLORADO COVER. The best cover ever put on a bee-hive. Hives (if entirely complete) cost you no more with this cover than with other covers, but they are far better. WHERE DO YOU LIVE? We will quote you a price with freight paid to your station if you send us your list of what you intend to buy. We ship goods each year into every State east of the Rocky Mountains: let us ship to you.

A PORTER BEE-ESCAPE FREE WITH FIRST ORDER IF YOU say where you saw this ad. 88-page Catalog free. Send for one at once.

C. M. SCOTT & CO., 1001 E. Wash St. Indianapolis, Ind.

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TO-DAY

Is the time for you to order your SUPPLIES. If you neglect it any longer, you will not have the goods when you want to use them. We are running day and night now, but ship promptly.

We save you one-fourth when you buy from us.

JOHN DOLL & SON,

Power Building, MINNEAPOLIS, MINN.

If you want the Bee-Book

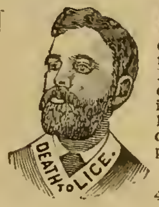
That covers the whole Apicultural Field more completely than any other published, send $1.20 to

Prof. A. J. Cook, Claremont, Cal.,

FOR HIS

"Bee-Keeper's Guide."

Liberal Discounts to the Trade.


DEATH TO LICE.

LOSS BY LICE

on poultry amounts to many times the cost of Lambert's Death to Lice—the sure preventive. Loss can be saved and profit made by its use. Frees sitting hens from lice without harming eggs or chicks. A trial 10c box will prove it. 100 oz., by express, $1.00.

O. K. STOCK FOOD CO.,
D. J. Lambert, Vice-Pres.
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MONDENG MFG. CO.

We are...... Manufacturers of Bee-Keepers' Supplies

SPECIAL!

Closing out a large quantity of No. 2 SECTIONS as long as they last, at $3.50 per thousand.

Write for Catalog.

MONDENG MFG. CO.,
147 and 149 Cedar Lake Road, MINNEAPOLIS, MINN.

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run the point of the scissors under one or both wings, and clip. Then I let the queen run back on the same frame about the center, when I can see that the bees begin to feed her and that she is not molested, after which the frame is put back in the hive. I use a queen-trap because in so doing the queen does not get the scent from my fingers, and is not so likely to be balled.

The bees are now storing some honey, as the orange-trees are beginning to bloom and the pears and olives are in full bloom.

Some one wrote of bees needing water during the past month. My bees used over 2 large pailfuls of water. I keep it in several places for them, as they need it during brood-rearing.

Most of my colonies are in a bee-house, and I wish I had room for all of them there, as it is so fixed that no ants can get in to molest the bees. The sills rest on brick and cement piers with a space filled with water.

I am expecting to go back to Ohio in April to see how the bees there are getting along. There has not been a day that those I have here have not had a flight, although there were a few mornings that were very cold, but the afternoons were warmer.

I secured about 2 tons of honey last season.

R. L. McCOLLEY.

Lake Co., Fla., March 14.

Floods in California

We have just had a fearful flood. The highest water for 21 years.

M. H. MENDLESON.

Ventura Co., Calif., March 14.

Full vs. Light-Weight Sections

Hurrah! for Mr. L. V. Ricketts and his 16-ounce section of honey, page 229. Well, I felt so tickled when I read his article that I could not help going right to work to write something, no matter how foolish it might read, especially to the advocates and practitioners of light-weight sections. But my experience in selling honey is practically the same as that of Mr. Ricketts. I gave my views on the full-weight sections in these columns last

FOR SALE

50 colonies of Italian and Carniolan BEES for sale, all in 1½-story 8-frame hives, nearly new, and all in good condition. One to 5 colonies, $5 each. For larger lots write for price, with stamp enclosed.

WM. J. HEALY,
18A4t MINERAL POINT, Iowa Co., WIS.

3-Frame Nuclei For Sale.

We can furnish 3-frame Nuclei of Italian Bees with Queen, by May 10, or thereafter, at $3 each, f.o.b. express office 100 miles west of Chicago. Tested Queens NOW, at $1.25 each. Address,

GEORGE W. YORK & CO.
334 Dearborn Street, - CHICAGO, ILL.

QUEENS

Best 3-band Italian Bees free from disease for—Untested Queens, early in May, 75 cts.; 2-frame Nucleus, with Queen, $2.25. Eight years' experience.

Chesley Presswood,
McDONALD, Bradley Co., TENN.

14A4t-18E2t Please mention the Bee Journal.

BLACK BREASTED RED GAMES—"The KING of Poultry." Large size, good layers of finest eggs. Hardy and fearless, the best all purpose fowl. Willow legs and Bay eyes. Illustrated circular. 25th year. H. H. FLICK, MANCHESTER, MD.

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year, and our friend and able commentor, Mr. Hasty, commented on the same.

I do not wish to go into detail on the subject this time, any further than to emphasize to honey-producers the fact that they must cater to the demand for honey by inducing the common class of people to buy their product, as my experience also teaches me that it is this class of people that consume the most honey. But they are under the impression that they are not getting their money's worth when buying it, especially the light, under-weight sections.

But I believe besides giving them a full-weight section there is considerable room for educating them as to the value of honey as a food and medicine. I tried a little experiment in the last-named direction a year ago last fall, spending between $15 and $20 for local advertising, clothing the advertisements in bee and honey talk. I had 100 gallons of extracted honey to sell, for which I expected $1 per gallon, but when shipping it to the larger cities it would net me no more than 75c. Well, it didn't net me much more at home after deducting the expenses for advertising and writing the same. But it brought the honey right where it belonged, that is, to the consumer.

But, again, it was not entirely satisfactory to me. Being of a selfish disposition as I am, and advertising honey as a health-food in general, it benefited others who sold in the same market nearly as much as it did me, and, finally, I concluded I would not "go it" alone again. A. C. F. BARTZ.

Chippewa Co., Wis.

Bees Wintered Well—Rain Needed

Bees on summer stands came through the winter in fair condition, but those wintered in cellars and caves came through better. There has been considerable spring dwindling both with outdoor and cellar wintered bees. Spring opened up very early and bloom has made a good start, but this morning the mercury stood at 10 degrees below freezing.

There seems to be an abundance of white clover starting, but we are needing rain to make it grow and bloom well.

H. G. WYKOFF.

Warren Co., Iowa, April 14.

Alsike Clover as a Honey-Plant

We often hear the question asked, What is the best honey-plant? First, in answering this question I will suppose that I am not over 600 miles from Chicago. Next, that no one raises a plant exclusively for the honey it will produce. What is known as Swedish

"If Goods are wanted Quick, send to Pouder"

BEE-SUPPLIES

Root's Goods at Root's Prices

Everything used by Bee-Keepers.
POUDER'S HONEY-JARS. Prompt Service.
Low Freight Rates. ∴ ∴ ∴ Catalog Free.

One of those nice FLEXIBLE BEE-HATS included free with every shipment, if you will mention it when ordering, telling where you saw the offer.

WALTER S. POUDER,
513-515 Massachusetts Ave., INDIANAPOLIS, IND.

Please mention Bee Journal when writing.

BEES A big stock ready to GO NOW QUEENS

We wish to say that we are now loaded with a big stock of Fine Bees and Queens ready to mail now; no delay; send for what you need at once.

We breed the 3 and 5 banded Italians, Cyprians, Carniolans, Holy Lands, and Albinos, in their purity, in separate yards from 5 to 30 miles apart.

Tested queens, $1.25 each; Breeders, $3 to $5 each. Untested, from either race, 75 cts.; 6 for $4, or $7.50 per dozen.

Full colonies, 1, 2 and 3 frame Nuclei cheaper than you ever bought good stock for before. No better to be had. Write for price-list FREE.

Safe arrival and perfect satisfaction guaranteed or your money returned. Prices of Queens to dealers, or in large lots on application.

We can sell you BEE-HIVES of yellow pine at about half the cost of white pine goods. Get our prices before you buy.

THE BEE AND HONEY CO.,
W. ATCHLEY, Mgr.
14Atf BEEVILLE, BEE CO., TEXAS.

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Important to You
And Complimentary to Us

Is the fact that, after 20 years in the SUPPLY BUSINESS, the last year shows an increase of 33 percent over any previous year.
Is there any better proof than this, that we satisfy and please our customers?
We have the facilities, the experience, and just the kind of goods you want.
They are the ROOT GOODS, and we sell them at Des Moines at Factory Prices.
Write for estimate and discounts. We can save you money. Send to-day for 1905 catalog.

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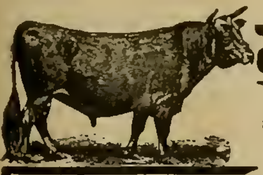

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will be exclusively discussed in that responsible stock paper
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10 CENTS A YEAR.

The Dixie Home MAGAZINE, largest, brightest and finest ILLUSTRATED MAGAZINE in the world for 10c a year, to introduce it ONLY.

It is bright and up-to-date. Tells all about Southern Home Life. It is full of fine engravings of grand scenery, buildings and famous people. Send at once. 10c a year, postpaid, anywhere in the U.S., Canada and Mexico. Six years, 50c. Or, clubs of 6 names, 50c; 12 for $1. Send us a club. Money back if not delighted. Stamps taken. Cut this out. Send to-day. THE DIXIE HOME,
24A48t No. 75, Birmingham, Alabama.

Please mention Bee Journal when writing

Send for Our 1904 Catalog and Price-List.

OUR HIVES AND SECTIONS
Are Perfect in Workmanship and Material.

By sending in your order NOW, you will SAVE MONEY, and secure prompt shipment.

PAGE & LYON MFG. CO., New London, Wis. U.S.A

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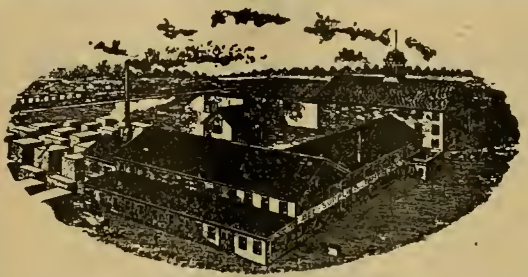
Dittmer's Foundation is the Best.

Send for Catalog, Samples and Discounts, and judge for yourself. 1904 output, 50 percent increase over 1903.

Full line of SUPPLIES, wholesale and retail.

Working Wax into Foundation for Cash a Specialty.
E. GRAINGER & Co., Toronto, Ont., Sole Agents in Canada for Dittmer's Foundation.

GUS DITTMER, Augusta, Wis.



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Discount for Early Orders

We carry a large stock and greatest variety of everything needed in the Apiary, assuring BEST goods at the LOWEST prices, and prompt shipments. We want every bee-keeper to have our FREE ILLUSTRATED CATALOG, and read description of Alternating Hives, Massie Hives, etc. WRITE AT ONCE FOR CATALOG

AGENCIES.—Trester Supply Co., Lincoln, Neb.; Shugart & Ouren, Council Bluffs, Iowa; Fulton & Ford, Garden City, Kan.; I. H. Myers, Lamar, Colo.; Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex. KRETCHMER MFG. CO., Red Oak, Iowa.

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The ORMAS Incubators & Brooders

Low in price. Fully guaranteed. Send for free catalogue.

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Enyart's Comb-Foundation Gauge

Gauges 18 different shapes of starters. Easy to cut 100 starters per minute. Illustrated circular free. J. E. ENYART & SON, McFALL, Mo.

16A4t

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GOOD DISCOUNTS ON EARLY ORDERS

COMPLETE STOCK OF BEE SUPPLIES--LEWIS CO.'S AT FACTORY PRICES

MUTH SPECIAL HIVE THE BEST DOVE TAIL MADE

SEND FOR CATALOG.

WE ARE ALWAYS IN THE MARKET TO BUY HONEY--SUBMIT PRICE.

THE FRED W. MUTH CO.

51 WALNUT STREET, CINCINNATI, OHIO.

Wisconsin Basswood Sections

And Prompt Shipments

Is what we are making for our customers.

—DOVETAILED HIVES AND SHIPPING-CASES—

We carry a full line of SUPPLIES. Ask for Catalog.

THE MARSHFIELD MANUFACTURING CO., Marshfield, Wis.

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NORRIS & ANSPACH
LEWIS' GOODS IN KENTON, OHIO

We handle a most complete line of G. B. Lewis Co's goods at their regular factory prices. Dovetailed HIVES, SECTIONS (all kinds), SMOKERS, VEILS—in fact everything for the bee-keeper. Send 10 cents for B-PRANKS, an amusing and instructive little pamphlet, or, it will be sent free for the names and addresses of 6 bee keepers.

Lewis Makes the Finest Supplies—
We Sell Them.

Wholesale and Retail. Send for Catalog.

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DAVENPORT,
IOWA.

HEADQUARTERS FOR
G. B. Lewis Co's B-WARE,
Dadant's Foundation.

We can serve you quick and save you freight and express charges. Send us your BEESWAX in exchange for other goods. Send for our Catalog.

LOUIS HANSSEN'S SONS.

Please mention Bee Journal when writing.

alsike clover produces as much honey as any plant grown in this region, and the honey is of the same quality as that of white clover. It is a fine pasture grass, and produces about twice the forage both for stock and bees as does the white clover. It is very hardy, does not easily winter-kill, will produce a good crop of hay on wet or medium land, and may be sown at any time when the land can be worked. It produces lots of seed, and consequently the seed is cheap. It is of a dark green color, and is very small.

As compared to alfalfa, it produces all the time, whereas alfalfa has seasons. Sweet clover is slow in starting, and after it blossoms is not good for hay. Buckwheat has a short season, and the honey is of a poor quality. Basswood has a short season, and in a prairie country is almost out of the question. So I might say that white clover is the only plant which may be compared with alsike, but while it is equal in some respects it will produce only about one-half as much honey per acre, and not one-third as much hay. Therefore, I would give alsike clover first place as an all-around grass for honey, hay and pasture. R. A. MORGAN.

Clay Co., So. Dak.

Prospects for a Good Season

Bees have wintered splendidly here with very little loss. Prospects are good all along the line. The weather is fine; everything in the fruit and vegetable line is growing and blooming, and if the weather continues good we will have the best and earliest spring in years. I look for a good season for honey, as white clover is coming on fine. I have 160 colonies to start with. W. S. FEEBACK.

Nicholas Co., Ky., April 3.

Bees Wintered Well—Dry Weather

My bees wintered well. I have 30 colonies that are good and strong, and one that is somewhat weak, but I think it will pull through. I lost one during the winter. Fruit-blossoms will be out in a few days, barring cold weather. The bees have been gathering pollen for about 3 weeks from elm, box-elder, and cotton-wood, with occasionally a day they could not fly because of the cold. It is quite cold to-day with north wind. Ice is on water in tanks or pails out-doors this morning.

Bees in this locality came through the winter in pretty good condition with not more

HONEY-JARS.

For a limited time we offer No.25 Honey-Jars, porcelain cover, metal screw cap, holding one pound of honey net, one gross in case complete in 5-gross lots, $4.00 per gross; less quantities, $4.50 per gross, f.o.b. New York. If you want to secure some, let us know at once.

HILDRETH & SEGELKEN,
265 & 267 GREENWICH ST., NEW YORK, N. Y.

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QUEENS ITALIAN QUEENS
BY RETURN MAIL.

Try Taylor's 3 banded leather-colored and 5-banded Golden Queens—the best honey-gatherers in America. Untested, 75c each, or $8 per dozen; tested, $1, or $10 per dozen; select tested, $1.50 each; breeders, the best, $3 each. I have been breeding queens for 17 years, and I know what a good queen is. No small queens sent out. I guarantee safe delivery. Send your orders to J. W. TAYLOR, Ozan, Ark.

16Atf Please mention the Bee Journal.

E. E. LAWRENCE, DONIPHAN, MO
(box 28), breeder of
Fine Italian Queen Bees
Orders booked now and filled in rotation. Send for price-list.

Wanted Queens, Bee-Supplies, Honey, etc., in exchange for Flower and Garden Seeds, Books, Gas Machine, Rifle and Cartridges, Silverware, Bicycle, Microscope, etc.

18A1t C. W. UNGER, Taftville, Conn.

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"DADANT'S FOUNDATION"
IT EXCELS.
* * * *
WE GUARANTEE SATISFACTION.
* * * *
BEE-SUPPLIES
OF ALL KINDS.
* * * *
Beeswax Wanted at all Times.
* * * *
DADANT & SONS, Hamilton, Ill.

The Rietsche Press

Made of artificial stone. Practically indestructible, and giving entirely satisfactory results. Comb foundation made easily and quickly at less than half the cost of buying from the dealers. Price of Press, $1.50—cash with order. Address,
ADRIAN GETAZ,
44Atf KNOXVILLE, TENN.

☞J.G. Goodner, of this State, writes me that he "prefers to pay $25 for a Rietsche Press than do without it."—A. G.

Please mention Bee Journal when writing.

Golden Queens and Bees

Ready June 1. Hustlers for honey; very gentle, non-swarming. Price-list now ready—also an 8-page leaflet on queen-rearing, including my experience in curing pickled brood, black brood and bee-paralysis, sent free to all who apply.
HENRY ALLEY,
13Atf WENHAM, MASS.
Please mention Bee Journal when writing.

$12.80 For 200 Egg INCUBATOR
Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day
GEO. H. STAHL, Quincy, Ill.

Please mention Bee Journal when writing.

Tested Queens by Return Mail,
—$1.00 Each—

We have a large number of Choice Tested Queens, reared last September and October, and wintered in 4-frame nuclei; these queens are vigorous and prolific, and of our fine strain of Three-Band Italians. Just the queens to build up weak colonies. Try them. Send for circular.
J. W. K. SHAW & CO.
13Atf LOREAUVILLE, Iberia Par., LA.
Please mention Bee Journal when writing.

than average loss. The season so far has been dryer than last but we look for rain soon. Farm crops are in good condition—spring grain all in, and farmers are waiting for corn-planting weather to get to work at that.

J. M. LINSCOTT.

Gage Co., Nebr., April 14.

Bees in Good Condition

Bees have wintered very well up to date; in fact, I never saw bees show so little signs of dysentery when they were placed on the summer stands as they did this spring. I have 160 colonies.

Success to the American Bee Journal.

WARD LAMKIN.

Cayuga Co., N. Y., April 4.

Last Season a Very Poor One

The season of 1904 was a very poor one for honey in this locality. I commenced in the spring with 18 colonies, and my honey crop was about 400 pounds. I now have 31 colonies. My bees are coming out on cold days and dying on the snow. I have kept bees for 30 years, and never had so many come out on cold days before. I packed them on the summer stands better than I ever did.

Putnam Co., Ind., Feb. 20. C. JOB.

Bees Wintered Splendidly in a Cave

The last was a poor season in this locality. Not very much surplus honey, but the bees built up in good shape for winter. I put 51 colonies in a cave 6x10x6 feet, and took out 49 and one queenless, there being only one dead colony. I think this excellent, considering the crowded condition.

Last year my better half did most of the hiving of swarms, my professional work keeping me at the office almost all of the time during swarming-time. I intend to quit practicing in a year or two. I am going North, and intend to keep about 200 colonies

SINGLE COMB BROWN LEGHORNS

Noted Winter-Laying Strain. Cockerel Mating, headed by Rochester Prize-Winner; Eggs, $2.00 per 13. Pullet Mating, headed by pullet line; pedigreed; Exmoor males, $2 50 per 15. Flock on range, headed by 2d Wis. State Fair winner, and others of equal quality, $1.00 per 15. Hens in all pens result of 15 years' scientific breeding.

Single Comb Buff Orpingtons. The grand new breed. No better quality in existence. $2.00 per 15 eggs.

Mammoth Bronze Turkeys. Hens up to 23 pounds each. Not inbred. Eggs $2.50 per 19; 25 for $5 00.

MRS. MILLIE HONAKER, Viroqua, Wis.
15-17-18A3t Please mention the Bee Journal.

Wanted BEES in shipping-boxes on L. or Danz. frames ready to ship now. State kind, price, safe arrival guaranteed. Address,
J. B. MASON,
17Atf MECHANIC FALLS, MAINE.

Bees For Sale Cheap

I wish to reduce my bees, and offer strong 3-L.-frame Nuclei, without queens, combs nearly solid with sealed brood, at $1.50 each. With queens, at 25c to 50c more, according to the Italian blood; all to be good, prolific queens. Satisfaction guaranteed. Can ship at once.
18A2t GEO. W. GATES, Bartlett, Tenn.

Will Sell or Exchange

45 complete 8-frame L. dovetailed HIVES (except frames), and 180 8-frame Ideal comb honey Supers, for bees in 10-frame hives or strong Nuclei. WM. C. DAVENPORT,
18A2t L. Box 80, WILMETTE, ILL.

FOR SALE

About 125 colonies of BEES, mostly Italian, in good 8 and 10 frame hives. Reference, N. E. France. For particulars write,
G. G. PIERCE, Kilbourn, Wis.

of bees. I think we will increase to 80 this year. I am going to try to ship my bees when I go away. W. H. ELLIS.

Calhoun Co., Iowa, March 25.

Bees Doing Well—Good Market for Honey

I have 12 colonies of bees, all in the cellar, which seem to be getting through the winter all right. They had a flight Jan. 31, and seemed to be very strong; they tried to rob each other.

Last season I secured from 7 colonies 285 pounds of comb honey in 4¼x4¼x1½ plain sections. I use the 8-frame kind with gable covers.

I am in the heart of a town of 6000 inhabitants, and you know how long 285 pounds of nice, white honey would last in such a place. I sell all my honey at 15 and 17 cents per section, and I would sell very much more if I had it the whole year around. I have 2 colonies of pure Italians, the first I ever had. I am completely "struck" on them, as they are very prolific.

There are about 50 colonies of bees in this town, owned by 8 different bee-keepers, so you see that we do not hurt each other's business. There are only two of us who take the "Old Reliable." I have loaned my Bee Journal to some of my neighbors, and think perhaps I will be able to get them to subscribe. S. W. STALEY.

Franklin Co., Pa., Feb. 27.

Bees Wintered Well—Home-Made Bee-Supplies

I started with 4 colonies of bees 3 years ago, and they stored 300 pounds of surplus honey the first year, but last year they did very poorly. I had 10 colonies, and secured only 70 pounds of surplus honey. The bees wintered well, as I lost only one colony each winter. I now have 14 colonies, which I took out of the cellar two weeks ago, all in good condition.

I am a common laborer and have no capital to start with, so I make my own hives in my spare time. I think the bees are a poor man's friend, as they can be handled with small means. I have made a bee-veil out of the cover of a tobacco pail and a screen. I cut out the center of the cover just enough to let the crown of my hat through and nailed the screen all around it, and sewed a thin cloth on the bottom.

I also have a little trick for nailing brood-frames. I take an inch board 20 inches long and 8½ inches wide, make a slide on each end of the board by nailing on a pair of cleats and a piece of band-iron for a spring to hold in place the end-pieces of the frame. Then I nail the top-bar to the top of the board. I next turn the board over and nail on the bottom. This makes the frame stiff and true. A little boy can nail frames together just as well as a man. This plan may help some novice. A. L. OLIVER.

Benton Co., Minn., March 9.

The Big Song Success

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Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

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Sent on receipt of price per mail.

T. F. BINGHAM, Farwell, Mich.

OTISVILLE, PA., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. FRED FODNER.

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☞ For prices refer to my Catalog.

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Honey and Beeswax

Chicago, April 18.—A carload of comb honey, (said to be from Colorado) came on the market about the first of the month. It was placed with a firm that does not make a specialty of honey, and to some extent has upset prices when looked at in print. It is put up in 24 section flat cases with wood slides instead of glass, and is more or less candied. Choice white comb brings 12½c; No. 1, 11@12c; amber, 8@10c. Extracted, white, 6@7c; amber, 5½@6½c; price being governed by quality, flavor and package. Beeswax 30c if clean and of good color.

R. A. Burnett & Co.

Cincinnati, April 20.—The conditions of the honey market to-day are not encouraging. The consumption is lacking, although we are looking forward to brighter days in the honey market. We continue to quote amber extracted in barrels and cans, 5½@6½ cents; white clover, 7@8c. Fancy white comb honey, 12@13c. Beeswax, 28c. The Fred W. Muth Co.

New York, April 19.—There is no change in the condition of the honey market. Very little comb honey selling and prices ruling about the same as our last quotations. Extracted in fair demand only. Beeswax firm at 30c.

Hildreth & Segelken.

Philadelphia, April 19.—There has not been much call for honey in the last two weeks. Prices remain unchanged. We quote: Fancy white, 11@12c; No. 1, 10@11c: amber, 9c. Extracted, white, 6@7c; amber, 5½@6c. Beeswax, 28 cents.

We are producers of honey and do not handle on commission. Wm. A. Selser.

Boston, April 24.—The demand for honey is light and the supply is, we would consider, heavy for this time of the year. Without question, much will be carried over to another season as the sales have been, generally speaking, light through the entire year. Fancy white we quote at 16c; A No. 1, at 15c; No. 1, at 14c. Extracted, from 6@8c, according to quality.

Blake, Scott & Lee.

Kansas City, March 31.—The honey situation does not improve. While there is a little better movement the prices seem to be lower. Fancy white brings $2 a case; No. 1, $1.75; amber and lower grades from $1.25 to $1.50. Extracted, 4½@6c. Beeswax, 28c.

C. C. Clemons & Co.

Cincinnati, O., April 18.—The large stock of comb honey, yet offered with hardly any demand, caused lower prices. I quote fancy water white at 12c; other grades in proportion, lower. Extracted is in the usual demand for this time of the year; quote amber in barrels at 5¼@5½c; in cans, ½c more; white clover, from 7@8c. Beeswax, 28c. C. H. W. Weber.

Albany, N.Y., Feb. 8.—Honey market dull this extreme cold weather, especially comb, which candies or granulates and cracks easily. We quote: Fancy white, 13@14c; No. 1, 12@13c; mixed, 10@11c; buckwheat, 10@11c. Extracted, better demand: Buckwheat, 6@6½c; white, 6@6½c. Buckwheat most in demand, as the Jewish people will have no other. Beeswax, 30@32c. H. R. Wright.

San Francisco, April 12.—White comb, 1-lb. sections, 11@12 cents; amber, 8@10c. Extracted white, 5½@6 cents; light amber, 4@5c; amber, 3@½3c; dark amber, 2½@3c. Beeswax good to choice, light, 29@30c; dark, 27@28c.

Stocks on the local market are not heavy and mostly common amber grades. The demand is slow. The new season being near, handlers are awaiting arrivals of new crop, which are expected to put in an appearance early in May.

IN THE HEART OF MICHIGAN

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Pedeville, near Bellinzona,
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18A1t Please mention the Bee Journal.

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44Etf W. J. McCarty, Emmetsburg, Iowa.

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American Bee Journal

OUR TOIL DOTH SWEETEN OTHERS

WEEKLY—$1.00 A YEAR
Published by GEORGE W. YORK & CO., 334 Dearborn Street

45th Year | CHICAGO, ILL., MAY 11, 1905 | No. 19

MASSACHUSETTS AGRICULTURAL COLLEGE

WEEKLY

THOS. WM. COWAN,
Editor of the "British Bee Journal"
(See page 340)

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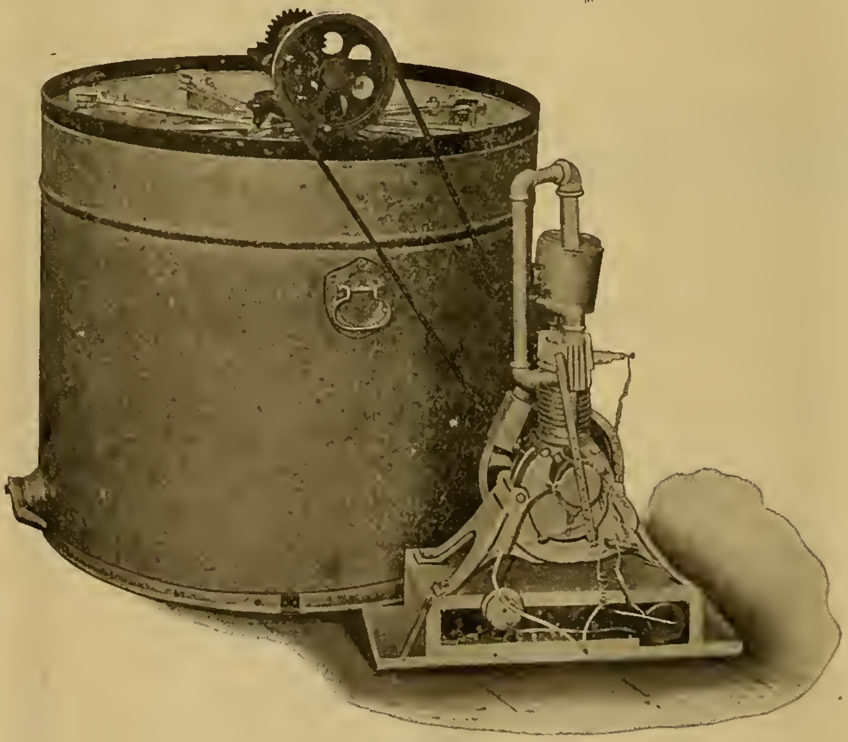

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GEORGE W. YORK, Editor
CHICAGO, ILL., MAY 11, 1905
Vol. XLV—No. 19

THE AMERICAN BEE JOURNAL
PUBLISHED WEEKLY BY
GEORGE W. YORK & COMPANY
334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec05" on your label shows that it is paid to the end of December, 1904.

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Objects of the Association

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00

General Manager and Treasurer—
N. E. FRANCE, Platteville, Wis.

☞ If more convenient, Dues may be sent to the publishers of the American Bee Journal.

The Honey-Producers' League

(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

MEMBERSHIP DUES

1. Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.
2. Any honey-dealer, bee-supply dealer, bee-supply manufacturer, bee-paper publisher, or any other firm or individual, may become a member on the annual payment of a fee of $10, increased by one-fifth of one (1) percent of his or its capital used in the allied interests of bee-keeping.

GEORGE W. YORK, Manager,
334 Dearborn St., CHICAGO, ILL.

Queen-Bee Free as a Premium

To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us ONE NEW subscription with $1.00 for the Bee Journal a year. Now is a good time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.

Editorial Notes and Comments

The Honey-Producers' League

Since the last report the Manager has received the following memberships with annual dues as indicated:

H. G. Acklin	$ 14
D. I. Wagar	3
T. P. Andrews	4
A. G. Woodman	15
Geo. E. Goodwin	4
E. F. Tiedt	5
C. H. Harlan	4
R. S. Chapin	3
Nellie Love	2
Thomas Meyers	1
E. A. Doney	1
Chas. Jakel	2
Colo. Honey-Producers' Association	14
Chas. Stewart	13
Wm. Hahman	1
Gustave Gross	2
Frank Proctor	1
A. A. Clarke	5
C. F. Walker	2
Herman Ahlers	4
C. W. Price	1
W. T. Cary	3
Ed Blackstone	1
Jacob Hofmeister	3
Wm. Muth-Rasmussen	10
Previously reported	1223
Total	$1341

In the first column on this page the reader will find something about the League, its objects and dues. We trust more of our subscribers will become members at once. Active work will be commenced just as soon as there is a sufficient fund in the treasurer's hands.

◆

Some Newspaper Glucose Yarns

Thanks are due Jos. M. Hynek for translating into English some of the things said about bees in a periodical published in a foreign tongue, in the following letter:

EDITOR YORK:—I read an article a few days ago in Hospodar, of Omaha, Nebr., stating this:

"People in large cities think, when they buy sealed comb honey, that it is pure honey, but it is not always so. There are many professional bee-keepers that have their bees work all summer to store glucose honey. The glucose is placed close by the bees in open barrels purposely prepared for the bees to store it and seal it. The bees will not go a long distance to look for nectar when they can get the glucose near by. There are cases of merchants in large cities who keep a few hives of bees on their roofs, and have glucose near by to make it into honey. These bees in large cities never see a blossom of any kind, and if they were transferred to the country they would get scared over different kinds of blossoms and flowers all full of nectar."

Now, Editor York, is it possible to keep bees on glucose all the year around? I am a beginner with bees, and know but very little about how to manage them, but I don't want any one to run down comb honey, or to run down professional bee-keepers. I could not call them professional bee-keepers who sell glucose for honey.

Please give us some information on this subject in the American Bee Journal. I am well pleased with the American Bee Journal.

Sauk Co., Wis. JOS. M. HYNEK.

The Hospodar is no doubt innocent of originating the statements made, having probably copied them from some paper possessed of a reporter with an imagination in lively working order. It may be that it will be glad to make a few statements possibly not quite so sensational, but at least having the virtue of being entirely truthful. The following statements it may safely make without fear of contradiction:

There are not many—there is *not one* professional bee-keeper—in the land who has his bees working all summer storing glucose, for the simple reason that bees could not be induced to do so. Only under stress could they be induced to take glucose in limited quantity for a short time.

If glucose, honey, or any liquid sweet were placed near the bees in an "open barrel," and if the bees should attempt to take it, the barrel would simply be filled with drowned bees.

If a thousand barrels of glucose were placed close by a colony of bees, and the nectar of flowers were to be reached by going 2 miles, the 2 miles would be cheerfully traversed, and not a bee would touch the glucose. Their natural instinct makes them prefer nectar, or its product—honey—to any other food that could possibly be offered them.

Quite a number of bee-keepers in the large cities keep bees on roofs or elsewhere, and these city bees produce tons of honey just as sweet and pure as that gathered by their country cousins, and they make it from precisely the same material—the nectar of flowers. Some of them may have to go quite a distance to reach the flowers, but they are sure to find them unerringly, and nothing less than Nature's product will satisfy them.

Will the Hospodar kindly give its readers the benefit of the preceding *facts?*

◆

Invention of the Movable-Frame Hive

It is a bit amusing to find that "locality" plays a part even in the matter of credit for the invention of the movable-frame hive. The average American bee-keeper will tell you that it is the invention of Langstroth, with probably no thought that any one in the wide world should have any other idea. The German bee-keeper will tell us that we are indebted to Dzierzon for the movable frame, and likely he has never heard the name Langstroth. L'Abeille Domestique, a late French text-book, utterly ignores both Dzierzon and Langstroth, and names Della Rocca as the inventor. Langstroth modestly disclaims entire credit, saying it was the work of more than one; but if Langstroth had never given us the movable frame in its present form, it is not so very likely that very many of us to-day would be using it. Dzierzon, who deserves undying fame for having given us the Dzierzon theory—parthenogenesis—can hardly be said to have invented a movable *frame*, because he had only a top-bar, cutting away the sides of the comb each time a comb was taken out, and for years he stoutly adhered to this, having no use for end-bars or bottom-bar. Still less practicable was the invention of Della Rocca.

◆

Bee-Keeping—Farmers' Bulletin 59

This bulletin, first issued by the U. S. Department of Agriculture, at Washington, D. C., in July, 1897, was revised in March of this year by its author, Frank Benton, who is in charge of apicultural investigations by our Government. Like other publications of a similar nature, copies may be had on application to any Senator, Representative, or Delegate to Congress, or to the Secretary of Agriculture, Washington, D. C.

Considerable new and very interesting matter has been added to this revised edition of "Bee-Keeping," Bulletin No. 59, from which we quote these paragraphs:

COMB FOUNDATION.

Comb foundation is now manufactured with extra thin septum or base, and with the beginnings of the cells marked out by somewhat thicker walls which the bees immediately thin down, using the extra wax in deepening the cells. This is not artificial comb, but a thin sheet of wax having the bases of the cells outlined on it. Complete artificial combs have never been used in a commercial way, although there exists a widespread belief to this effect, which is founded on extravagant claims that have appeared from time to time in newspaper articles.

NO MANUFACTURED COMB HONEY.

Owing to the appearance of statements of a sensational character to the effect that complete honey-combs are manufactured by machinery and filled with sweets lower in price than honey (glucose, cane-sugar, or mixtures of these), then sealed over and sold in the market as genuine honey, a strong suspicion exists regarding the comb honey commonly offered for sale. Wide circulation has been given to these wild stories by sensational newspaper writers, and even monthly periodicals, usually far more discriminating and accurate, have repeated them. Some writers have even tried to locate the "comb-honey factories" in given cities, but investigation has always shown that the locations were mythical. The forfeit of $1000 which a reputable firm has had standing for 15 years past for a pound of manufactured comb honey of a nature to deceive the buyer still remains unclaimed.

The National Bee-Keepers' Association, at its annual convention held in St. Louis in 1904, offered also a like forfeit of $1000 for satisfactory proof of the existence of such a thing as manufactured comb honey. But no claimant has come forward, notwithstanding the $2000 which awaits his proof. The fact is, there is no truth in the "yarn," and no one has thus far shown the thing possible. The comb honey in the markets is pure and wholesome—a healthful and nourishing sweet, easier to digest than cane-sugar or any of the syrups so commonly sold. It is worth a place on the tables of all who can afford to use it.

LEGISLATION AFFECTING APICULTURE.

Many States have in recent years passed laws having for their purpose the eradication or suppression of contagious diseases among bees. State and county inspectors have been appointed under these laws, whose duty it is to go about and ascertain where diseased colonies of bees are located, and recommend the treatment to be given, or, in some cases, to carry out this treatment, even to the complete destruction of colonies or apiaries where the virulence of the attack seems to warrant it. Where these laws have been conscientiously and energetically executed, much has been accomplished toward freeing the apiaries of the given State from disease.

Some States have passed laws making it a misdemeanor to spray fruit-trees during the time of blossoming, since thereby bees are poisoned, and besides the injury to the apiarist the pollenation of the fruit-blossoms is seriously interfered with.

Laws against the sale of adulterated goods as genuine, known commonly as pure-food laws, are in operation in some of the States, and where bee-inspectors or bee-keepers have taken the pains to have these laws applied to the marketing of honey, a check has been put upon the selling of adulterated honey in the liquid form, which has been practiced to a greater or less extent, and still occurs in some of the city markets.

In general, the rights of bee-keepers to own and cultivate bees, either within the limits of cities or on farms adjoining those devoted to grazing and general stock raising, are becoming more clearly defined through decisions of supreme and county courts. In this connection the work of the National Bee-Keepers' Association should receive mention.

This organization is in no sense a trades union, but has for for its purpose the defense of its members against unjust attacks upon their legal rights, the suppression, in so far as possible, of the sale of adulterated honey, the securing of legislation for the protection of its members and favorable to the general advance of the industry, as well as the dissemination among its members of advanced ideas in bee management and information regarding the marketing of apiarian products. The membership fee of one dollar per annum entitles every honey-producer to membership and participation in all of the benefits enumerated, as well as to the published report of the annual convention held by the association. The membership numbers nearly 2000 at the present time, and the influence of this large body of intelligent bee-masters is already being appreciably felt in the general advance of the industry in this country.

◆

Foul-Brood Legislation in England

Foul brood is reported to be on the increase in some parts of England, and probably will so continue so long as ignorant and careless bee-keepers have no fear of legal restraint from scattering the seeds of the disease. Legislation does not seem very near at hand, and, strange to tell, the chief hindrance is the apparently hopeless disagreement of bee-keepers. In this country scarcely any practical bee-keeper opposes legislation, the only trouble being to get legislatures to move in the matter.

Miscellaneous News Items

Chairman R. L. Taylor, of the Board of Directors of the National Bee-Keepers' Association, writes us that by a practically unanimous vote the General Manager of the National will hereafter receive 20 percent of the receipts from dues as his annual salary. But even that amount will be small pay for the services of a man like Mr. N. E. France.

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How to Keep Bees is the title of "a handbook for the use of beginners, by Anna Botsford Comstock, B. S.," and published by Doubleday, Page & Company, of New York, N. Y. The price is $1.00 net, or $1.10 postpaid. It is cloth-bound, with 226 pages, 32 of which contain photographic illustrations. The preface contains these words:

"It is not intended to be a complete treatise for the professional apiarist, but rather a handbook for those who would keep bees for happiness and honey, and incidentally for money. It is hoped, too, that it will serve as an introduction to the more extended manuals already in the field."

◆

New French Bee-Book.—"L'Abeille Domestique" (The Domestic Bee) is the title of a work of 350 pages, duodecimo, published in France, written by Lucien Iches. It is printed in clear type, with 132 illustrations, and for a book of its size seems well filled with up-to-date information. It is divided into four parts: I. The Apiary. II. Anatomy and Physiology of the Bee. III. Management of the Apiary. IV. Products of the Bees. French readers may obtain the work for 3 francs from Garnier Freres, 6 Rue des Saints-Peres, Paris.

◆

Mr. A. B. Carpenter, of Tulare Co., Calif., writing us May 1, said:

"With me swarming is getting late, probably on account of cool weather. Bees are filling every nook and corner of their hives with honey. I think some of going to extracting, regardless of swarming, only partially, however. Appearances indicate a good honey season."

◆

West Florida Bee-Keeping seems to have had a backset according to the following from Mr. J. B. Hunter:

"Just as we were getting ready to take the tupelo crop of honey, a fearful rainstorm set in and cut the crop off almost entirely."

◆

Mr. and Mrs. Thos. Wm. Cowan, of London, England, passed through Chicago Saturday, April 29, en route to their California home, in Monterey County. Mr. Cowan, as most of our readers know, is the honored senior editor of the British Bee Journal.

It is Mr. and Mrs. Cowan's intention to remain in California until late autumn, then visit British Columbia, and after that return across the continent through Canada on their homeward journey. They have crossed the Atlantic seven times, and think that once more may be the last crossing. They expect to reach London again about Jan. 1, 1906.

Mrs. Cowan had contracted a severe cold on the Ocean, so was not very well when she arrived in Chicago. But Mr. Cowan was looking and feeling first-rate; in fact, even better than two years ago when he was here, we think.

Mr. and Mrs. Cowan are delightful people to meet, and we regretted that we were not permitted to see more of them. They have been in our country so often, and for so long a time heretofore, that they seem more like our own people than foreigners.

We, as no doubt all who know them, wish them a pleasant summer in their home in "Sunset Land," and then a safe return to their native and far-away England.

On the front page we present one of Mr. Cowan's latest pictures, which we think is a very good one.

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The Minnesota Association, through its Secretary, sends the following for publication, which is of interest to Minnesota bee-keepers:

EDITOR AMERICAN BEE JOURNAL:—The Secretary of the Minnesota Bee-Keepers' Association is authorized by the Executive Committee to deny the statements made in a recent circular sent out by the so-called "Committee on Co-operation," in so far as they relate to the connection of that Committee with the Association. At the annual meeting held Dec. 7, 1904, the chair ruled that the Committee was not appointed by, nor as a part of, the Association, and, therefore, had no standing in the meeting. An appeal to the house being taken, the ruling was sustained by a decisive vote. In view of these facts, the Association does not wish to be placed in the false light of appearing to endorse, or be responsible for, the statements in the circular referred to. Yours truly,

MRS. W. S. WINGATE, *Sec.*

May 1, 1905.

Contributed Special Articles

Home Marketing of Honey—Unripe Honey

BY S. B. SMITH

ON page 51, those who could sell more honey than they can produce right in their home market, are invited to tell how they do it. As I belong to that class, I will tell how I do.

The first and most important of all is good, ripe honey. The second requisite is neatness. Prepare the honey for market in such a manner that it will be attractive, pleasing to the eye. I work mostly for section honey, and the propolis is all scraped off and the sections are neat and attractive, and every section has my name stamped on it.

I have some extracted honey every year; this I put up in one-pint fruit-jars, holding one and one-half pounds, and in this locality they are more salable than larger quantities.

Some bee-keepers advocate peddling honey. There is no objection to that method of disposing of honey, provided they like it, but I don't have to peddle mine. There is a merchant here that takes all of it, and would take more if I produced it. I get 14 cents per pound for section honey and 15 cents per pint jar for extracted honey—or 10 cents per pound and he furnishes the jars. This man has taken my honey for the past 8 years, and I have established such a reputation for it that sales are readily made.

If any of the neighbors want my honey they can get it at the same price the merchant pays me, but I am not much troubled with neighbors' custom, as honey is peddled at 10 cents per pound for section honey, and 6 to 8 cents for extracted. I have no complaints to bring against men who sell under market price—it is a privilege they have, and I shall enter no protest, but I will relate a little incident that happened last season.

Lady No. 1 bought a quantity of extracted honey of Mr. A. for 10 cents a pound. Lady No. 2 went to Mr. A. to buy honey, but when told that the price was 10 cents a pound she said, "Mr. B. is selling honey for 7 cents a pound, and Mr. C. for 6 cents." The result was that she bought honey of Mr. B. at 7 cents.

As time passed Mr. A. dined with lady No. 1, and she had some of his honey on the table, and when she passed it she remarked that there was a great difference in honey. Your honey is thick and good-flavored. I was at lady No. 2's the other day, and we had some of Mr. B.'s honey, and it was thin and watery, and of very bad flavor.

The readers of the American Bee Journal can draw their own inferences, but Mr. A. went home without any enmity against the 7-cent honey man.

A good name is greatly to be desired, and I think more of a good name than I do of many pounds of unripe extracted honey. My honey is all ripe when taken from the hive, whether in sections or extracted, and I will say that the man who always puts good, ripe honey on the market in a neat, attractive manner will never lack for customers. The advantage or disadvantage of putting your name on your honey is a matter for each to decide; with me it is an advantage.

I will give my opinion on extracting unripe honey. There seems to be a strife among bee-men in this vicinity to see who can get the largest amount of extracted honey. The hives are closely watched, and as soon as the combs are well filled with honey, with little or no capping done, the honey is extracted. Those who follow this method obtain a large amount of thin honey of a poor quality, thereby doing great harm to the market.

I was very much interested in the report of the convention of the National Bee-Keepers' Association held at St. Louis, especially what is said about "extracting unsealed honey," on page 61 of the American Bee Journal, and I approve Mr. France's idea about extracting unripe honey. I say, let it remain on the hive until it is ripe. Perhaps the quantity of well-ripened honey will be a little less than that of unripe honey, but the quality is much better, and it is quality, not quantity, that I want. Honor is the foundation upon which every man should build, and let that honor be unsullied.

There is much complaint about the poor quality of extracted honey, and it will be thus until some bee-keepers learn that it is to their advantage to have a good article of honey instead of a poor one in the market. Let us deal honestly with ourselves and our fellowmen. It takes a little longer to do a piece of work well, than only half do it, and it takes a little longer to produce good, ripe honey than it does the unripe, but it pays better in the end, every time.

Mille Lacs Co., Minn.

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The Deterioration of Races of Bees

BY ARTHUR C. MILLER

FROM time immemorial until a comparatively recent date it was the custom among the so-called Christian peoples to "take up" or destroy their heaviest colonies of bees, which meant the killing of the most virile, and left the less suitable to perpetuate the race. The evil results of this practice at last became apparent, attention possibly being called to it by information from Eastern peoples; at any rate, bee-keepers in the 17th century began to practice "taking up" the weak and medium colonies, and leaving the best for stock.

Also, there were soon begun efforts and devices for securing part of the honey without destroying the bees. The evil results of the long-continued practice of "selecting the unfit" for breeding were not to be overcome in a season, and until after the introduction of the yellow races we find frequent references pointing to weak stock.

The yellow bees came from the followers of Mahomet, who are forbidden to take animal life except for food, and whose practice was to deprive the bees of only a part of their honey, which gave opportunity for the law of the survival of the fittest to work untrammeled by the hands of unwise men. Despite their sojourn in Italy, this Eastern blood seemed virile enough when it reached here, and its superiority to the native stock was quickly seen.

The introduction and spread of the yellow bees from Italy, and the benefits derived therefrom, are too recent history to need repetition here, but not long ago evidences of weakness began to appear in this race in various parts of the country. Contagious diseases spread with alarming rapidity, and reports of less serious ailments came from all sides. These conditions have been ascribed to various causes, but there is a disagreement as to which one is the most important. Possibly the publicity given the subject of bee-diseases accounts for the recognition and reporting of many cases, but while this would explain the increase of reports, it does not shed light on the conditions upon which the reports are based.

The existing state of affairs is strikingly like that existing before the introduction of the Italian bee, the natural inference from which is that the stock has been losing its vigor.

What we may properly consider a further support of this belief is, that not many years ago many bee-keepers began reducing the size of the brood-chambers of their hives and calling for smaller hives. Their queens were not keeping the 10 Langstroth frames properly filled, and the size of the hive was blamed. Perhaps the blame was rightly placed, and then again perhaps it was not.

Most of such reports came from bee-keepers following well-defined lines of instruction and practice. The spread of diseases and the gospel of small hives have followed not far behind the heels of the "transferred-larvæ" system of queen-rearing; just far enough behind to give strength to the suspicion that they are related. The system was well exploited, judicious advertising increased the sale of queens reared by the system, and the evils have increased also.

It is idle for the advocates of that system to say the queens are as fine as any that can be produced by any method, until they can show that the above-mentioned evils have no connection with that system.

The system as taught and practiced, together with the confining of the young queens in cages on candy food, makes impossible the fulfilling of the natural laws of developing. I make this statement knowing full well whereof I speak, and knowing also that it will probably raise a storm of contradiction. Now and then queens may be found reared by this system, that are all that could be desired, and it would be strange if among the thousands reared some were not found which chanced to dodge the evils. But they are the exceptions. Providence Co., R. I.

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Ezera Thrasher and His Bee-Keepin'

BY WALTER S. POUDER

"MY name is Thrasher—Ezera Thrasher—and I drove to town to look after some of your gums and other fixens made for bees. My boys is gettin' big enough to work, and I am going to take it easier. I am nigh 50 years old, and I am going to make a business of keepin' bees. I believe I like the business better than anything that I know of, and I have found out that bees work for nothin' and board themselves, and that is the kind of help that I have been wantin'. The boys is now big enough to tend the place, and they are good workers, 'specially when Manda—that's my wife—gets out and helps 'em. I have 'leven swarms in good box-hives, and I 'low to make just as many more swarms this season as I kin. You see, some time ago they dropped our post-office where I used to go to rest up, and now they have a rural route through my neighborhood, and I was so lonesome for a while that I hardly knew what to do, but since I got in the bee-business I am glad to stay around with my bees. I've been told that Tim Smith, our old postmaster, was about to be fired anyhow for closing the office on Ground Hog Day. You see he 'lowed it was a holiday, but he found out afterwards that it was no holiday at all."

In this manner Ezera Thrasher introduced himself to the clerk in a bee-supply store in Indianapolis. He purchased no supplies on this trip, but took home with him a quantity of honey, both comb and extracted. He explained that the neighbors seeing his bees, often wanted to buy a few pounds of honey, but that he had none on hand. Returning, he continues thus:

"Well, I now see my way clear to handle the honey-business in Indianapolis, both wholesale and retail *next year*. This coming winter I will buy a good many sections and an extractor. Say, you fellers told me that beatin' on tin pans did no good towards stopping a swarm. I want to say to you that it does bring 'em down, for I have tried it. Why, I could tell by the way the bees acted that they intended to lite out, so I runs for Manda's dish-pan, and as soon as I commenced to beat they began to lite on an apple-tree. Manda scolded like everything about having her dish-pan beat up, but I saved a fine swarm.

"Well as soon as they commenced to lite I sent one of the boys over for my neighbor, Silas Alfing. Silas and I had always been good friends, and he had never seen a swarm settled in a tree before, but, blamed me, if Silas and I didn't have a fall out right there about those bees. It was this way: I got up in the tree and tied Manda's clothes-line around the limb, and I was to saw the limb off and let bees and limb down to Silas. Just as I hollered for Silas to be ready, the limb swung down and brushed off most of the bees, but the limb was not cut clear off. The first thing I did was to push away the leaves so I could look 'down and see what Silas was doing, and what I see just beat all, for there was Silas running just as fast as he could right through Tom Jamison's wheat-field. By this time them bees was getting thick around my shoe-tops, and climbing right straight up. I climbed down as fast as I could, and then I started after Silas, he being heavy-set and me not very limber, but I soon caught up with him, and you just ort to seen us a fightin' them bees—seemed like we both got excited, and I hate to say it, but from that day to this Silas has not spoke to me. *Next year* I am going to belong to that big bee-association and have some protection."

Mr. Thrasher called on us again in November, and his enthusiasm had not subsided in the least.

"I know three fellers that are makin' a heap of money off their bees; one at Alexandria, one at Peru, and one at Winchester, and I reckon that there are plenty others doin' as well, and if they can do it I can, too. Some of my bees are pretty weak, and some are scarce of honey, but I 'lowed that a swarm that don't make enough to keep 'em is no 'count. I have 2 or 3 hives that have no queens yet, but I thought I would get queens for them next spring."

Mr. Thrasher called on us again in the following February.

"Here, you fellers, is 6 pounds of beeswax; give me what it is worth and that settles the bee-business with me. The hogs upset some of my best hives during that last cold-spell, and the weak ones, too, are all dead. I am goin' back to farmin' again, and will keep one or two more cows, for Manda likes to help with the cows. My oldest boy is coming to town to get on the street-cars as motorman, and this will leave a heap of hard work for me. Recollect that last crate of honey you sent me? Well, I did not do well with that crate. It was put off at stop No. 13 on the Interurban Line all right, but it 'peared like everybody in our deestrict went and took a look at it, and when I went to sell it they all wanted to know if I didn' buy that honey in Indianapolis instead of gittin' it from my own bees. I was stumped, and I have a good deal of it on hands yet. You will find that wax all right, but Manda has scolded a heap about me spoiling her copper-bottom wash-boiler. Manda is always pokin fun at me, too, and asking me what I am going to do *next year!*"

The last we heard about Ezera Thrasher he was down at the State House making an effort to lobby against a whipping-post Bill. Marion Co., Ind.

Convention Proceedings

The Illinois State Convention

The 14th annual session of the Illinois State Bee-Keepers' Association was held in Springfield, Nov. 15 and 16, 1904. The proceedings of that meeting are published in a pamphlet, as mentioned on page 324 of the American Bee Journal, from which we take the following:

REPORT OF THE STATE INSPECTOR

To the Illinois State Bee-Keepers' Association I submit the following report:

In making this my first annual report of State inspection, I will say that the work to be done in this State is far more important than the best-informed on this subject can imagine. Bacillus alvei (foul brood) I have found to exist from the counties bordering on Lake Michigan to the banks of the Mississippi River.

In my work I visited bee-keepers in 32 counties, and found foul brood in most of them. I also found the infection had been brought by buying bees and queens from diseased apiaries and careless dealers. Any one buying queens should be very careful. The trouble may be avoided by removing the queen from the cage upon arrival into a clean cage, and burning the cage and attendant bees that came by mail. I believe that the best way to get rid of the disease is to educate the bee-keepers through the bee-papers, agricultural and horticultural publications.

A great many mistake chilled or pickled brood for foul brood. It can be easily distinguished from foul larva, as pickled brood, or chilled brood, occurs after the larva has passed the 13th day from the egg. The young bee takes on the nymph form, that is, the formation of legs, wings, etc., while the larva infected with foul brood dies in the pupa state about the 10th day. After a few days it settles back into the bottom of the cell and turns into a putrid, ropy state, and can not be shaken from the cells, while the pickled and chilled brood shrivels up and can readily be drawn from the cells intact.

I find that the practical bee-keepers are, as a rule, their own inspectors—the trouble comes from the novice or persons who never have seen the inside of a hive of live bees. In my visits with the bee-keepers, I find them all anxious to learn to know foul brood, so they can take care of their own and neighbors' bees. As a rule they are intelligent above the average, and very pleasant ladies and gentlemen.

In my work last season I inspected over 4000 hives, and although last year was a very poor honey year, the bee-keepers were not discouraged, but are looking forward to the coming season for better results.

I believe that good results could be attained, as Mr. N. E. France, State Inspector of Wisconsin, suggested in his report, by bringing together the farmer bee-keepers at the winter Farmers' Institutes, and having there a talk on bees and their diseases; also distributing to bee-keepers the old, reliable McEvoy treatment, which never fails to effect a cure. I find that a number of bee-keepers have the wrong idea regarding the treatment and costs, as in their letters they want to know what the cost will be to have their bees inspected.

I appointed Mr. Herman F. Moore my deputy last year, to look after the disease in Cook and adjoining counties. He visited a number of apiaries, and I herewith give his report for work done:

Park Ridge, Ill., July 11, 1904.

Mr. J. Q. Smith, Lincoln, Ill.—

Dear Sir:—I have finished my 30 days of inspection of apiaries. I visited about 125 yards, and found foul brood in about 12, containing 88 hives of bees. Possibly one-half of the 88 are diseased more or less. These figures show the importance of the work, and the need for a better law. The work has been very interesting.

Herman F. Moore,
Deputy Inspector of Apiaries.

In my treatment and instruction to others I have used the McEvoy treatment. I have never burned a colony of bees where there was a fertile queen and bees enough to form a nucleus, which can soon be built up by adding combs of brood from strong colonies; the hives can be used again by boiling in strong salt or lye water. Care should be taken in removing the bees from the diseased combs, so that no robber-bees can have access to the combs. The work should be done at night while no bees are flying, or, if in daytime, in a tent or well-enclosed building. J. Q. Smith.

Lincoln, Ill.

WINTERING BEES

The subject of wintering bees is one which has perhaps been discussed and written upon as much as any other topic of apiculture, and it is of paramount importance to the bee-keeper to know how to bring his bees through, from the close of one honey harvest to the commencement of another, in good condition, so as to get the full benefit of the yield, whether it be large or small. This is especially an appropriate time to give the matter our consideration so as to refresh our minds for the approaching winter. If we were asked the question as to what was the principal cause of bees not wintering well, and their reduced condition in spring, and later when it occurs, I would answer. Cold and the unfavorable condition of the bees to withstand it. With this view, then, what are some of the favorable conditions conducive to successful wintering?

First, on the summer stands, to start with strong colonies. Second, plenty of well-sealed stores of good quality in the same combs on which the bees are clustered. Third, protection against winds. Fourth, a double-walled hive or its equivalent by packing. Fifth, ventilation so as to keep the inside of the hive dry, but no draft through it.

As to hives being shaded or standing in the sun, it depends upon the kind of winter. If warm, shade; if long-continued cold, like the winter of 1872-3, 1877-8, 1881-4-5, we would give the hives the benefit of all the sun's warmth possible.

During some of those extremely cold winters we have saved the bees, as we believe, by covering the hives with snow. In all such cases we ventilated the hives above so as to allow the moisture to escape through the upper chamber.

For outdoor wintering of bees we believe that colonies should be allowed to increase to their full capacity of strength during the summer season. In fact, for other purposes we think the expansive system, or giving the queen and bees full room, is more profitable than the contracting and manipulating plan, for Illinois. While with proper care bees may be wintered with comparative success on their summer stands, but for the 8 or 10-frame single-wall Langstroth hive, a cellar or building so constructed that it will be not only frost-proof but not easily affected by outside temperature, is much more desirable. With part of our bees stored in such a repository we have time and again wintered them with a loss of not more than 3 or 4 per cent.

During the past thirty years, with but two exceptions, we have had almost perfect success in cellar-wintering, while those colonies wintered on the summer stands have suffered more or less especially during the coldest winters. Our conclusion is that the chief point to be kept in mind is the protection of the bees from cold, from the time it commences in the fall, until warm weather in spring has come to stay. Jas. Poindexter.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Some Difficulties of a Beginner

I bought 5 colonies of bees last spring and was all last year learning the different bee-traits. These bees were in the Hilton double-walled hives containing 8 Hoffman frames to a hive.

1. I notice that the bees have built the comb out so far that it is impossible to remove the frames. How shall I go about remedying this mistake? My idea was to take a new hive and put a frame with brood and honey from another hive in the center of the hive and put frames with new foundation on either side of the one containing brood, and brush the bees into the new hive, putting the old frames one by one on the top of the frames to let the bees remove the honey. Will I lose too much brood in so doing, or is there a more simple, practical plan, and when must I do this to get best results possible?

2. Also, at what temperature must comb honey be kept during winter to have the best results?

3. One of the colonies is not as strong as I should like, and a stranger who keeps some bees, suggested that the queen was not very vigorous, and also suggested a new queen. There is plenty of honey, and also brood hatching. The thought occurred to me that I could take a frame, later on, from my finest colony containing a queen-cell, and exchange it for one of the others, kill the old queen, and let the bees rear a new one, or put on a queen-catcher and let the queens battle it out themselves. Is this practicable, or would it be economy to buy a new queen? I have a bump of curiosity on my head, and should like to carry out an experiment with one colony if some one who knows how thinks it might work.

I must mention that the 3 colonies that have the brood-frames built so full were in that condition when I bought them, and I did not know what to do, and so left them in. I know better how to do now if I can only get out of my present difficulty.

The stranger before mentioned told me I had wintered my bees finely, and especially for a beginner. And to be sure they are all in good shape with the exception of the above difficulty. I have the Hilton double-walled hives, as I have mentioned, and last fall I turned all the entrances to the south and put all the hives in a row and packed them all around the backs and sides with leaves. I kept the entrances clear from snow all winter, and before putting on the cushions in the fall I put cut-loaf sugar on top of each hive to make sure they had enough to eat. Each hive contains a great abundance of honey now, but the bees seemed to prefer a change of diet, as they ate about three-fourths of the sugar. Miss Subscriber.

1. Please don't think of such extravagance as to waste all the brood, as you would do by the plan you propose. It would very likely cut in two the profits of that colony. Just what is best to be done depends upon the actual condition of the combs. You say "the bees have built the comb out so far that it is impossible to remove the frames." If you mean by that that the septum or center of each comb is in the right place in the center of each frame, and the bees have made the comb so thick in places that the combs can not be drawn out, then the remedy is easy. Select what looks to be one of the straighest looking combs, take a long-bladed knife, and slice off the part that bulges, so that you can lift out the frame, and that will give you room to get out the other frames, when you can slice off any bulges on them. Then instead of returning the frames just as they were, reverse

every alternate one, and the bees will not renew the bulges.

You may mean, however, that the bees have built crooked, making a comb from one frame into another frame. Even that case may be managed as above directed, providing the work is not too crooked.

If you can not possibly get out any frame for a starter, you would better proceed another way. Get a frame of brood from another colony, put it in an empty hive, fill up with combs, foundation, or empty frames, and set this hive over the faulty one. Now drum the bees up into the empty hive, pounding good and hard on the sides of the hive below. When nearly all the bees are in the upper hive, set it off, then move the old hive off the stand, put on the stand the new hive into which you have driven the bees, put over it a queen-excluder, and the old hive over that. In four days look for eggs in the lower hive, and if you find none you may know you failed to drum the queen up, and you must drum again. Twenty-one days after getting the queen into the new hive the worker-brood will be all out of the cells in the upper story, when you can remove it if you like.

Another way is open after you get the bees drummed out. Take a knife with a long blade, or a hand-saw, and cut down at each side, so as to sever any comb fastened to the sides. Now turn the hive upside down, and with a little jarring you can jar all of the contents out of the hive and lift the hive off. Then you can cut loose attachments so as to get one frame after another separate from the rest, and if the bees have not made too crooked work you may be able to crowd each comb back into its own frame.

2. Summer heat is the best temperature, but as that is hardly practicable, keep it as much above freezing as you can.

3. Don't be in too much of a hurry about condemning that queen. She may be as good as any other, and not to blame for the weakness of the colony. If she keeps filled with brood and eggs all the comb the bees can cover, that's all you ought to ask of her. If after a reasonable time you find that she is not bringing up the strength of the colony, and decide to give a cell from another colony, dispose of the queen a day or two before giving the cell, or the bees may destroy it.

A Place for Stimulative Feeding

The country here is perfectly lovely after the unusual rainfall, and all prospects for bees and honey seem good. Anyway, the bees are swarming. *Five* swarms of bees settled in the garden of a friend of mine in San Diego in less than two weeks. My bees in Colorado never swarm till June.

By the way, a few weeks ago it was asked whether there were many localities where bees could fly out and rear brood for a month before they could get flowers to work on. They certainly seem to do so with us in Western Colorado. We are over 6000 feet above the sea, and the vegetation depends upon extremes of cold or heat, of course. The nights are bitter cold well on into the spring, and there is seldom anything for the bees before the middle of March, when they are thick on the elm trees. The sun, however, is usually strong even in midwinter, and the bees get frequent flights, and begin to take bran or flour early in February.

REBECCA HALLEY.

San Diego Co., Calif., April 8.

Here seems to be a place where, if anywhere, stimulative feeding ought to be a benefit. Please tell us how that is.

Honey-and-Salt Croup Cure

The following is given in the Herald and Presbyter: Give frequent doses of salt and honey, giving at each dose a teaspoonful of salt mixed with a tablespoonful of honey.

It may be said here on general principles that it is not always advisable to give honey in connection with other ingredients so as to make a very disagreeable combination. The temporary benefit may be overbalanced by the distaste acquired for so wholesome an article as honey for daily food.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B. Rural, Toledo, Ohio.

CANADIAN BEE-WINTERING EXPERIMENTS.

The wintering experiments at the Canadian Experiment Farm seem to show that when the hive is raised by 2-inch blocks on one side it winters better than when bottom and entrance are left in outdoor style; also, that with 3-inch blocks it does a little better yet. With wet sand below them and a wet sheet over them they were less quiet, but no very great harm seemed to follow. Interesting to see that colonies wintered wholly on sugar syrup, while they did about as well as those wintered on refed extracted honey, used nearly 2 pounds more of it per colony. I should have guessed that they would eat a little less if restricted to syrup of granulated sugar.

Now as to outdoor wintering. Of 2 colonies tolerably well protected with building paper and dead air space, one of them died and one of them went through in moderately good order. We've seen the like of that before. Of 4 colonies packed in a tenement with 6-inch spaces, and the spaces filled with cut straw, all came out in good order. Pages 208 and 209.

SAINFOIN AS A HONEY-PLANT.

Here's a kick at the Canadians about their sainfoin experiment. The hay-producing part of it was splendid. Incidentally they call it a honey-producer; so I suppose we infer that they saw some bees on it. But, surely, they might have had the grace to tell us how constantly and to what extent bees were seen to frequent it. Those points are of decided interest, and also in dispute. Give us a little more English, brethren—and don't let the taciturnity of the northern Ojibways affect you so. Page 209.

SPECIES OF BEES.

The human disposition to find out about things is on the whole a praiseworthy one. We want to know about the North Pole, and about the South Pole; and quite a good few thousand dollars can be had to spend in exploration almost any time. And it kind o' seems to me that mankind should care as much to know just how many and what species of bees the world contains as they do to know what islands (if any) are adjacent to the North Pole. If the authority quoted by Prof. Cook could be called sufficient and complete, we might say the world has nine species of bees. Probably, however, Dr. Ashmead does not claim that his information is complete; and very likely some of his nine will have to undergo considerable discussion before their right to stand as separate species is conceded all around. So, for the present, we have to be satisfied to say that the social bees, akin to the domestic bee, are somewhere near nine in number of species. As to dividing up the genus Apis into three genera, I do not at all claim to be a competent judge; but on cat-look-at-a-king principles I will say what I think. I think that the fact that a man is a great scientist does not save him, alas, from the temptation to indulge in mischievous tom-tinkering just because he thinks he can! How many genera and species of dog should we have, if every dog not only had his day but his Latin titles and credentials? *Longicanis* would fit the dachshunds, and *Microcanis* the little pocket poodles, and *Megacanis* the St. Bernards and Danes, and *Velocianis* the hounds, and *Mordeocanis* the bull dogs. If we ever do get our science of bee-names right, the largest possible specimen of *Mordeocanis sebitem* should be set to stand off the meddlers. Page 214.

LONGEVITY OF WORKERS AND DRONES.

With positive evidence that work shortens the lives of the worker-bees, one would think that the "idle drone" should live the longer for his idleness. It seems, however, that the queen-breeders do not succeed in keeping them quiet 45 days, when they put a supply of them in a queenless hive. That seems conclusive, or nearly so. Riotous bumming in search of sexual service shortens life a little faster than honest labor does, apparently. Page 215.

DARK AND MEALY BEESWAX.

So the localities where the beeswax inclines to be dark are simply the localities where there is iron in the water; and it would be a simple cure if rain-water were always used in rendering. Sounds sensible. Mr. Dadant is likely right, that too much boiling turns wax into meal; but I feel pretty well assured that too much honey in the water is also one cause of the mischief. Page 216.

EVAPORATING HONEY IN THE HIVE.

For insisting on the real *modus operandi* of evaporating honey in the hive, in place of a venerable but non-existent one, Arthur C. Miller is to be commended. Page 217.

"Feeding Back"—A Distinct Branch of Bee-Keeping

At the St. Louis convention the matter of the profit in feeding bees sugar that it might be stored in the sections was quite thoroughly discussed. The position was taken by some that it was folly for people to say that the bees were fed sugar that they might make it into honey, that there was no profit in it. Dr. Miller asked: "If I feed sugar at five cents a pound, how much must I sell the product for to get my money back?" No one could tell him, and, if there could have several persons answered him, there would have been as many different answers as there were persons. It was finally voted that Louis Scholl, of the Texas Experiment Apiary, should make some experiments and report.

Let me say that the feeding of sugar or honey, that it be stored in the sections, is as distinct a branch of bee-keeping as that of commercial queen-rearing. Mr. Doolittle once made some experiments in feeding back honey that it might be stored in sections, and reported a decided loss. I have fed thousands of pounds in which I secured three pounds of comb honey from the feeding of four pounds of extracted honey; and there you are. It depends upon the weather (the temperature), the strain of bees, the strength of the colonies, the size of the hive, the consistency and temperature of the feed, and a whole lot of details too numerous to mention. An experiment in this line will prove little, or nothing, as almost any results *can* be secured. Although I have made a decided success of "feeding back," I am not inclined to advise it for the general bee-keeper.—Beekeepers' Review.

Bee-Keeping in Bosnia

The last speaker at the great bee-keepers' meeting held in Dornbirn was Franz Gloessl, who reported the condition of apiculture in Bosnia, the extreme southern province of Austria bordering on Turkey. He said rational bee-keeping had made advances only very recently. The movable-comb hive had been introduced by the immigrants from Germany, Hungary and Tivol. In 1899 he had organized a bee-keepers' society, which had at the end of the first year eight hundred members, mostly Turks. The society soon made an appeal to the government and succeeded in receiving material grants. For instance, no tax was to be levied on such hives as contained movable combs and removable supers. Bee-keepers were furnished lumber gratis for constructing their hives. To further bee-keeping, soldiers and policemen were taught bee-keeping, etc., and were urged to keep bees whenever possible.—American Bee-Keeper.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to DR. C. C. MILLER, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Preventing Afterswarms

According to Heddon's method of preventing afterswarms, as explained on page 6 in "A B C of Bee-Culture," how many days from time of first or prime swarm until the young queen will be laying in the parent colony again? MISSOURI.

ANSWER.—The young queen is likely to be laying somewhere in the neighborhood of 18 days from the issuing of the prime swarm. That time, however, may vary no little. The issuing of the prime swarm may have been hindered one or more days by bad weather, in which case the time will be just that much less than 18 days. The young queen may be slow about meeting a mate, or she may be slow about beginning to lay, making the time longer.

Alfalfa Honey—Wintering Bees—Extracted vs. Comb Honey

1. Is alfalfa honey of stronger flavor than white clover? I have never sampled both at one time, and the alfalfa honey of Colorado and New Mexico seems to taste much stronger than the (Ohio) white clover product.

2. A hole dug in a bank here and roofed in is far drier than any eastern cement affair. Would it pay to try cellar-wintering? Mercury seldom goes below zero, and bees can usually have a flight every few days during winter, and the honey harvest comes late in the season.

3. For outdoor wintering would it not be easier to number hives (bodies) rather than have the stands numbered?

4. Where extracted honey sells for as much as or more than comb, is a fellow a fool when he produces comb honey? NEW MEXICO.

ANSWERS.—1. There must be a good deal of difference in honey of the same name in different localities. I have eaten a good deal of Colorado and Utah alfalfa, and it is much less pronounced in flavor than white clover.

2. Cellar-wintering would probably not do at all with you.

3. It is convenient to have the same number on the same stand, but also to have the number on the hive-body, changing the number if the hive is put on a different stand.

4. He would seem to lean in that direction.

Tar Paper—Packing Bees for Winter—Using the Dummy—Comb vs. Extracted Honey

1. Do you think that tar paper used on hive-tops will taint the honey in the hive? I had some honey last year that had such a smoky taste I could not eat it. Do you think the tar paper was the cause?

2. I have been thinking of packing my bees in winter quarters after this with a shallow super over the brood-chamber having a piece of canvas nailed on the top edge of the super, and then pack chaff over that. Would that be too much air-space over the brood if the hive is well packed with a foot of chaff all around?

3. I have some 10-frame hives that will take 10 frames and leave about ½-inch to spare for a dummy. Would you crowd a thin dummy into that space, or leave out one frame and use a dummy? or would that then leave too much space behind the dummy?

4. Do you think there is more money in comb honey than extracted, counting the comb you must give with the honey (and which the bees must make again), separators, sections, etc., and also counting, on the other hand, the cost of extracting-frames, extractor, uncapping-can, storage-tanks, tins and jars, for extracted honey?

I am a young man, and equal to all the necessary conditions of either side of the business, but I wish to find out which is going to pay the better. Personally, I am in favor of comb honey, as the bees put it into a package without any extra work in comparison to extracted. I wish also to say that I consider the privilege of asking Dr. Miller worth double the subscription price of the "Old Reliable." ONTARIO.

ANSWERS.—1. Depends somewhat upon how the covers are made. If there is a board surface or other surface between the tar paper and the bees, there ought to be no trouble. If the tar paper is down next to the bees, it might affect the honey.

2. That air-space full depth of the super ought surely to do harm. Why not nail the canvas on the underside of the super?

3. Put in the dummy—as long as you can. No danger of comb being built behind it.

4. The man that lives inside your clothes is the only man in the world that can settle that question for you. There are veterans who have fairly tried both; and they are very sure they can make more clear money with comb. Other veterans who have given just as fair a trial are equally sure they can make more with extracted. And both are right. The pasturage has something to do with it, and the market. The man has also something to do with it, and your preference for comb makes a difference in your case. Now that's not a very satisfactory answer to one who speaks so kindly of this department; but you see that's one of the things I don't know.

Preventing Propolis on Sections

I have some old Simplicity hives with section-holders having tin on their side, and find that there is a small space between the top of the section and top of the section-holder. If I should cut the top slat off and trim the end-bars down so they will be even with the sections, and place a super cover over all, will not that stop the bees from propolizing the tops of the sections? Can you suggest a better way? DELAWARE.

ANSWER.—I'm afraid the proposed remedy will hardly work as well as you expect. If you leave no space, you'll find it a hard thing to get the sections in, and still harder to get them out. And no matter how little space you leave, you'll probably find the bees will crowd in some propolis. After "rastling" with that sort of thing for years, I found a remedy in adopting T supers, which leave both the tops and bottoms of sections entirely open. In this locality, at least, bees put less propolis on an exposed surface than where just a crack is left.

Using Honey from Empty Hives—Robbed Colony—Moths in Hives

About 4 weeks ago I bought out an apiary and all the fixtures pertaining thereto. There were about 25 colonies, with extra hives, supers, shipping-cases, etc. In the unoccupied hives there are a great many frames almost full of nice, clean honey, and I don't know what to do with it. The hives are the 8-frame Langstroth, and there are also a number of partly-filled uncapped sections.

1. Will it be all right to put the supers on with these sections just as they are?

2. Would it be well to put new swarms into these hives, leaving the honey in them?

3. How can I keep this when the hot days come?

4. What ought I to do with a colony when it has been robbed? Last night I found one that had been robbed and gave it a frame of honey, and this evening it is all gone.

5. What will keep the moths out? WISCONSIN.

ANSWERS.—1. No, indeed.

2. Yes, only not more than a fourth of the comb capacity should be filled with honey.

3. The hot days will do no harm to the honey, only they will encourage the worms that almost surely will be in the combs, and these you must fight with bisulphide of carbon or sulphur. If the combs are kept in a cool, dry cellar the worms will hardly do much harm before time to use the combs for swarms.

4. Generally it is just as well to let them entirely alone, for the colony is likely to be queenless, and the bees so old as to be of no value. If, however, a good queen is present, as shown by the brood, and if there is a fair population, it will be worth while to try to save them. Close the entrance so that only one bee can pass at a time; pile hay or straw close in front and around the hive a foot or so deep, and keep it soaking wet so long as the robbers seem inclined to trouble.

5. Bees; keep your colonies strong, and the bees will keep out the moth, although Italians are better at it than blacks.

Roaches in Hives—Starters—Salt and Water for Bees—Covering for Brood-Frames—Moving Bees

1. When opening the hive the other day I noticed a number of roaches in the upper story. Is that an indication that anything is wrong?

2. In putting starters in brood-frames, does it make any difference if they are not all of the same width?

3. I notice that some bee-keepers give their bees salt and water. Ought the two to be mixed, or should the salt be given in one dish and the water in another?

4. Would not a white cloth over the brood-frames do as well as a honey-board?

5. I must move my bees a short distance, and they now have a fence in front of them about a foot from the hives. Would you think it necessary to put this fence in front of them when I move them? IOWA.

ANSWERS.—1. The roaches find it warm and comfortable over the hive, and so they like to stay there, but it is not likely they do any harm, for the bees will not allow them among the combs.

2. No, only it would not be best to have one frame filled clear down and another only a very slight starter. It is, of course, better to have all frames entirely filled.

3. Mixed; but if they have plenty of water, they can get along.

4. Yes, only the bees gnaw holes in the cloth. Nowadays neither cloths nor honey-boards are used as much as formerly. Many prefer to have simply a quarter-inch air-space between top-bar and hive-cover.

5. No.

Reports and Experiences

Putting Weak Colonies Over Strong Ones

I notice in the item on page 307, in regard to putting weak colonies over strong ones, that the assertion is made that the upper colony loses its field-force not only once but twice. Now I wish to disagree. In theory possibly it does, but in practice it does not. I was one that gave it a trial last spring, and if I remember rightly there was only one other man at the Chicago-Northwestern convention who reported having given it a trial,

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and he gave it only a partial one, I believe. It seems to me that if it were so that a colony loses its field-force twice in the same spring a man having the apicultural standing which Mr. Alexander has, instead of having practiced it for 20 years, would have discarded it long ago. He advised practicing it in the following way:

The 2 colonies are back in their normal condition from 15 to 20 days before the first fruit-blossoms open. Then if proper precautions are used it is possible to move colonies a short distance at any time during the season with very little loss. My bees have not had flights this month to exceed 20 hours all told, and to-day is April 30. The editor of the Review says that the strong ones lost as much as the weak ones gained. I can not entirely agree with him there, as I think that the 2 colonies placed one above the other would be able to keep the inside of the hives at a higher temperature than when placed on their separate stands, as part of the heat of the strong one would, in place of going out of the entrance, help to keep the upper one warm, and the same amount of bees would be able to cover and rear more brood in that way than when on their separate stands.

Then there is another great advantage in protecting the weak colonies from being robbed, which, as every large bee-keeper knows, means something in the spring when the bees have nothing to do but to look for mischief. As for the loss of queens, I think that will be very slight, if proper attention is paid to it, for out of the 36 colonies I treated last spring I didn't lose one. I was very much pleased with the practice, and while I am not as enthusiastic as Mr. Pearce seems to be, I am sorry that I can not give it a further trial this spring, as my colonies are all very strong. But I will certainly give it another trial at the earliest opportunity, and hope that a goodly number of bee-keepers throughout the country will do so this spring. H. F. Strang.

Oceana Co., Mich., April 30.

Baby Nuclei

This subject has presented itself as one worthy of consideration through the answer given me by Mr. Hasty, on page 104. I am ready to admit that if queens were *reared* in baby nuclei they would be poorer queens than those reared in the old way, and those that are batched in baby nuclei are never better.

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But few who use the baby nuclei advocate giving them even ripe queen-cells, and I think it can be done to advantage only when the weather is warm. The man who uses the baby nuclei to advantage is he who *mates* queens in them. The vitality of a queen is not made to depend upon her mating, but upon her rearing.

For the benefit of those who are using, or expect to use, the baby nuclei, I will give our plan. We have cells built in full colonies, and when sealed we place them in a nursery cage in a full colony where there is a laying queen, between 2 frames of brood. Here we have warmth and moisture sufficient to hatch them properly, and they will be fed by the young bees through the wire gauze. Here they should remain until old enough to mate. The reason for placing the cage in a colony with a laying queen is that if it is placed in a queenless colony when the queens are 4 or 5 days old the bees will ball the young queens through the wire and kill them.

I claim that a queen mated in a baby nucleus is the safest queen, and I am not alone in this. Mr. Gill, of Colorado, tells how he lost $200 through a shipment of queens he re-

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13Atf NORRIS & ANSPACH, Kenton, Ohio.

ceived, the queens having been taken from full colonies, when they were at the height of egg-laying. If they had come from baby nuclei where they never had an opportunity to reach their full capacity in egg-laying, no doubt they would have proved satisfactory.

While southern queen-breeders are benefited by the use of baby nuclei, I think we have shown that the buyers are benefited also. While queen-rearing is our leading pursuit we have not lost sight of the fact that our success depends upon the quality of the queens that we sent out. We know that the baby nucleus is now receiving its criticism, but the more criticism it gets the more favor will come to it from the investigations drawn out by its users. Be sure it has come to stay. We hope it may prove beneficial also to northern bee-keepers. JOHN W. PHARR.

Goliad Co., Tex., Feb. 19.

Prospects in Mississippi

Farming operations are moving nicely. Corn is being worked and cotton planted. Melons are up, tomatoes are put out in the field, and peas are being shipped. Cabbage prospects are promising, some beginning to head.

I have had two swarms of bees this spring, one coming out to-day. We keep only a few colonies for our own use. There are so many bees in this part of the country that honey does not sell very rapidly in the local market, often going at 5 cents per pound. Here we also have an abundance of home-made sugar-cane syrup, which to the average southern palate is far superior to the honey.

D. G. ASHLEY.

Copiah Co., Miss., April 23.

Shook Swarms—Foul Brood

I have read so many things in the American Bee Journal that I feel like writing something to try to help some of my brother bee-keepers. I am surrounded by foul brood, and boil everything thoroughly that the bees have used.

I shake my bees every other year, or half of them every year, getting my increase from the other half by natural swarming. I commence on the strongest as early as I think

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J.G. Goodner, of this State, writes me that he "prefers to pay $25 for a Rietsche Press than do without it."—A. G.

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Ready June 1. Hustlers for honey; very gentle, non-swarming. Price-list now ready—also an 8-page leaflet on queen-rearing, including my experience in curing pickled brood, black brood and bee-paralysis, sent free to all who apply.

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13Atf LOREAUVILLE, Iberia Par., LA.

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they can make a living. I put the brood of the 2 strongest colonies on the weakest one, and so on till I am through. I always put all the bees in the new hive. It saves time and I do not have to look for the queen.

I now have two-thirds of them finished, with no danger of getting foul brood. I will shake the young bees again in 3 weeks. Being shaken so early they have plenty of young bees of their own when the main honey-flow comes. The weak ones are very strong after being shaken, because of the brood that is given to them, so the colonies are all strong in time for the main honey-flow.

When I shake the second time I take out the combs from which brood has hatched, and take them to the honey-house to be extracted, putting the unhatched brood on the weakest colonies as before. If there is any foul brood I lose only the brood on the last one. If there is none I set to one side and shake again in 3 weeks. I run no risks from foul brood. I have shaken 14 colonies this spring, and have seen no signs of it yet. A. T. BAIN.

Tillamook Co., Oreg., April 10.

Adulterated Honey

I suppose all bee-keepers know that comb honey can not be adulterated in the frame or section, but tons of glucose, with a small piece of comb in it, are sold in Missouri. It is always on sale here in my own town, and has been for years. I have talked with people that had bought it, and they say it has a brassy taste, not fit to eat. No doubt some will say they wouldn't think it could be sold with good honey in other stores close by. Well, I can't explain it, but it is here for sale. I visited a town last year 10 miles from home and found it for sale in two stores. It comes from the wholesale grocers at Kansas City.

If we want to stop such stories as that in the New York Tribune, we probably will have to stop the sale of the stuff. I have never had a sample analyzed, but I am confident that it is glucose. I think the stuff and the blame the bee-keepers bear on account of it

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I wish to reduce my bees, and offer strong 3-L.-frame Nuclei, without queens, combs nearly solid with sealed brood, at $1.50 each. With queens, at 25c to 50c more, according to the Italian blood; all to be good, prolific queens. Satisfaction guaranteed. Can ship at once.

18A2t GEO. W. GATES, Bartlett, Tenn.

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18A2t L. Box 80, WILMETTE, ILL.

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CONVENTION NOTICES.

Illinois.—Mr. O. Taylor has appointed the spring meeting of the Eastern half of the Northern Illinois Bee-Keepers' Association at the residence of B. Kennedy, on May 16. The place is situated 7 miles southeast of Rockford, and 3 miles northeast of New Milford. All bee-keepers are invited to attend.

Illinois.—The spring meeting of the bee-keepers of the west part or Freeport District of northern Illinois will be held at the residence of the President, N. A. Kluck, May 22, 3 miles southwest of McConnell, Ill. All bee-keepers are requested to attend. Persons coming by train will be met at McConnell by teams from 8:30 to 9 o'clock a.m. J. W. Johnson. Sec.

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T. F. BINGHAM, Farwell, Mich.

Otisville, Pa., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. Fred Fodner.

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do a great deal of harm. We have a very strict pure food law here, but as far as the bee-keeper is concerned it is a dead letter.

Linn Co., Mo., April 12. Irving Long.

Snowstorm in April—Sweet Clover

We are having a snowstorm to-day, which is coming on the fruit-bloom and lots of green and tender things that would be better for having sunshine.

I have been putting in sweet clover for 2 or 3 years, and I had begun to feel quite proud of my acres of it until I read of the man with 400 acres. That knocked me right over backward, for I realize now that I am a very "small potato." I have about 40 acres, most of which is last fall and this spring seeding, so that not more than ¼ will bloom this season. I am not entirely sure, but I think there is no blank time here from fruit-bloom till frost, and I am quite sure that if all our dependence was upon white clover I should go out of the honey-business. W. H. Mills.

Boone Co., Nebr., April 15.

Hiving Swarms—Hoffman Frames

I notice on page 88 an item on sawing off swarms. I will give the system I use, which never has failed me yet.

In 1903, when swarming was a daily occurrence, upon coming home one night my wife met me at the gate with a smiling face. She led me into the back yard, and showed me a hive under the best peach-tree. I immediately realized that the bees had swarmed, and she had succeeded in hiving them, which she knew pleased me very much, as I have always devoted my leisure time to the bees. But, dear me! the beautiful peach-tree was a total wreck. (I live in town, and have only a few nice fruit-trees). She had made several attempts to get the bees before she was successful. But I put on a bright face over it, and was thankful that with so much rough handling the bees did not get angry, for about 40 "kids" of the neighborhood had gathered around to witness the performance, but no one had been stung.

The next swarming occurred on a Sunday when I was at home. The swarm settled in an apple-tree where it was almost impossible to get to it without sawing half the tree down. I picked from a hive a double black cloth about the size of the hive, which had been used as a sort of quilt over the bees, and was saturated through and through with propolis. I wrapped this around a pole long enough to reach the cluster, then shook all the bees off at once, and held the pole there, and all settled on it. I shook them in front of the hive, and all went merrily in. This pole set up in a tree near where the bees are likely to settle when they are swarming, causes them to sometimes alight on it, or if it is held where they seem to be getting ready to settle, they will settle there at once. It has never failed with me, and I would like some one else to try it, and let me know with what success it is used. I am sure it will save many a nice fruit-tree, lots of dangerous climbing, and much time.

On page 108 I notice an article on Hoffman frames. I have used many different kinds of frames, but will discard all but the Hoffman just as soon as possible. I have only one fault to find with them, which I have overcome, so I consider them the best I have used yet. In handling colonies in summer when time is money, things must go quick. I find in first removing the frames I have some trouble in getting particular frames out quickly, and in putting them back I find, especially in large colonies, that as many as 7 or 8 bees can be crushed. I have about remedied the trouble in both cases by removing about ¾ of the bearing space of the beveled bar, leaving at the bottom about half an inch and the same at the top. It does not change the spacing a particle. The frames are very easily removed anywhere in the hive without any trouble, and it lessens the bee-killing qualities about 95 percent. I think if the frame was made in this way it would meet with much greater favor—at least none go into my hives without this change. Pius Mohr.

Scott Co., Iowa, Feb. 22.

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Honey and Beeswax

Chicago, April 18.—A carload of comb honey, (said to be from Colorado) came on the market about the first of the month. It was placed with a firm that does not make a specialty of honey, and to some extent has upset prices when looked at in print. It is put up in 24-section flat cases with wood slides instead of glass, and is more or less candied. Choice white comb brings 12½c; No. 1, 11@12c; amber, 8@10c. Extracted, white, 6@7c; amber, 5½@6½c; price being governed by quality, flavor and package. Beeswax 30c if clean and of good color.
R. A. Burnett & Co.

Cincinnati, April 20.—The conditions of the honey market to-day are not encouraging. The consumption is lacking, although we are looking forward to brighter days in the honey market. We continue to quote amber extracted in barrels and cans, 5½@6½ cents; white clover, 7@8c. Fancy white comb honey, 12@13c. Beeswax, 28c.
The Fred W. Muth Co.

New York, April 19.—There is no change in the condition of the honey market. Very little comb honey selling and prices ruling about the same as our last quotations. Extracted in fair demand only. Beeswax firm at 30c.
Hildreth & Segelken.

Philadelphia, April 19.—There has not been much call for honey in the last two weeks. Prices remain unchanged. We quote: Fancy white, 11@12c; No. 1, 10@11c: amber, 9c. Extracted, white, 6@7c; amber, 5½@6c. Beeswax, 28 cents.

We are producers of honey and do not handle on commission.
Wm. A. Selser.

Boston, April 24.—The demand for honey is light and the supply is, we would consider, heavy for this time of the year. Without question, much will be carried over to another season as the sales have been, generally speaking, light through the entire year. Fancy white we quote at 16c; A No. 1, at 15c; No. 1, at 14c. Extracted, from 6@8c, according to quality.
Blake, Scott & Lee.

Kansas City, March 31.—The honey situation does not improve. While there is a little better movement the prices seem to be lower. Fancy white brings $2 a case; No. 1, $1.75; amber and lower grades from $1.25 to $1.50. Extracted, 4½@6c. Beeswax, 28c.
C. C. Clemons & Co.

Cincinnati, O., April 18.—The large stock of comb honey, yet offered with hardly any demand, caused lower prices. I quote fancy water white at 12c; other grades in proportion, lower. Extracted is in the usual demand for this time of the year; quote amber in barrels at 5¼@5½c; in cans, ½c more; white clover, from 7@8c. Beeswax, 28c.
C. H. W. Weber.

Albany, N.Y., Feb. 8.—Honey market dull this extreme cold weather, especially comb, which candies or granulates and cracks easily. We quote: Fancy white, 13@14c; No. 1, 12@13c; mixed, 10@11c; buckwheat, 10@11c. Extracted, better demand: Buckwheat, 6@6½c; white, 6@6½c. Buckwheat most in demand, as the Jewish people will have no other. Beeswax, 30@32c.
H. R. Wright.

San Francisco, April 26.—White comb, 1-lb. sections, 11@12 cents; amber, 8@10c. Extracted-white, 5½@6 cents; light amber, 4@5c; amber, 3@3½c; dark amber, 2½@3c. Beeswax-good to choice, light, 29@30c; dark, 27@28c.

There are no heavy quantities on the market but more than can be placed at full current rates. A shipment of 150 cases was made by steamer to Belgium and 68 cases to Germany.

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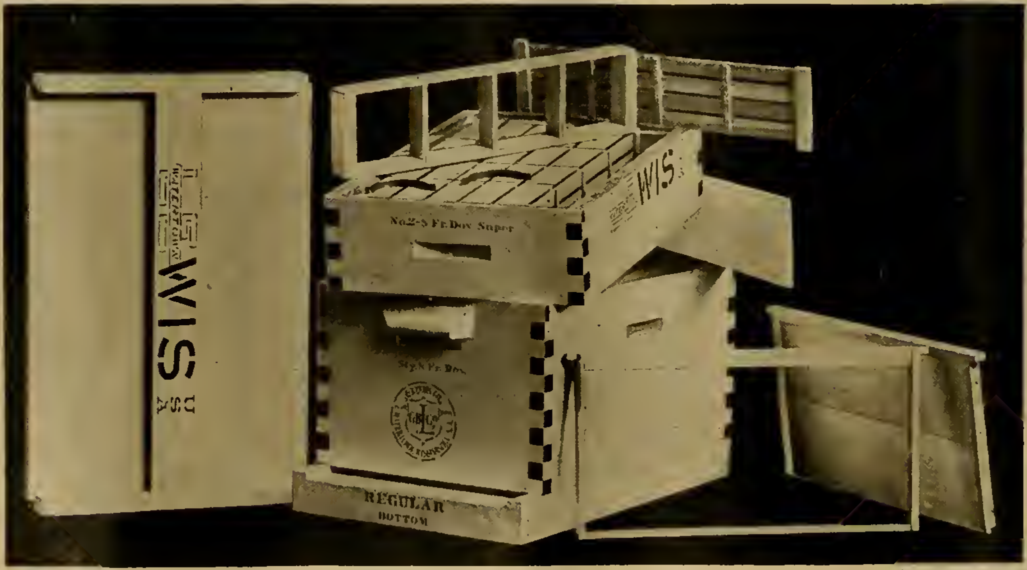

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  Colorado Honey Producers' Association, Denver.
  Fruit Growers' Association, Grand Junction.
  Robert Halley, Montrose.
ILLINOIS—Dadant & Sons, Hamilton.
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American Bee Journal

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45th Year CHICAGO, ILL., MAY 18, 1905 No. 20

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(See page 356)

D. E. MERRILL

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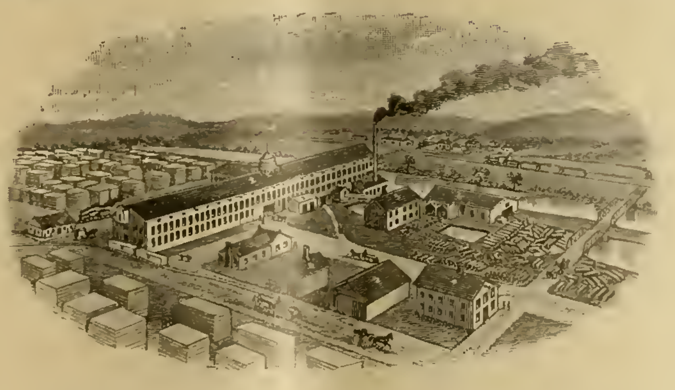

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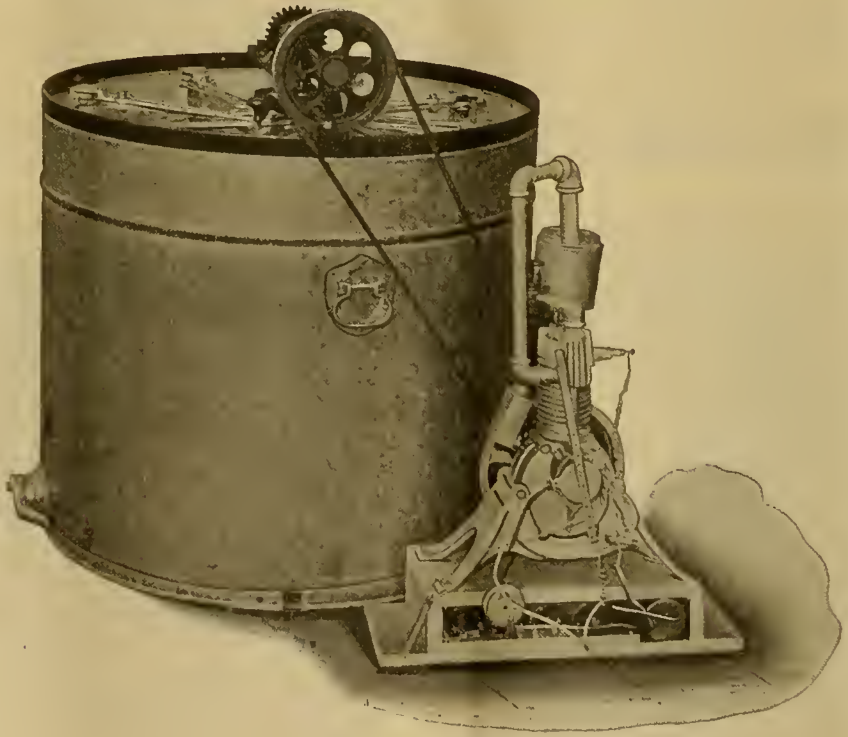

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GEORGE W. YORK, Editor

CHICAGO, ILL., MAY 18, 1905

Vol. XLV—No. 20

THE AMERICAN BEE JOURNAL is absolutely an independent publication, and not connected with any bee-supply business whatsoever. It stands entirely upon its merits as an educative force in the field of bee-keeping, and as a medium for legitimate advertisers in apicultural or other lines. It is the oldest, and only weekly, journal of its kind in America. Its publishers believe that it deserves to be in the hands of every would-be progressive successful bee-keeper in the land. It is in its 45th year, and to-day is acknowledged to be better in every way than at any time during its long and honorable history.

Editorial Notes and Comments

Bee-Keeping Being Recognized

More than ever before is bee-keeping being recognized as a rural industry that deserves consideration on the part of those who are seeking a healthful as well as fairly remunerative outdoor occupation. We are led to this remark on account of the large space recently devoted to instructive illustrated articles on bees and bee-keeping in such magazines as Country Life in America, The House Beautiful, Country Calendar, etc. The last-named publication is a new one beginning with the May (this month's) number, and the large edition printed was sold almost before it was off the press.

So it seems that bee-keeping is just beginning to be appreciated. Like poultry-raising, only within a few years has it been developed, and to-day see to what wonderful proportions it has grown.

As our country grows in population, more and more will the smaller rural industries be developed, and so bee-keeping will come in for its share of the increased interest and consequent enlargement of its borders.

All this should increase the general demand for honey as much, perhaps, as it will augment the size of the crop produced. But what is most needed is that those who are led to embark in bee-keeping through the recent published articles shall be impressed with the necessity of thoroughly imforming themselves on the subject if they expect to make a success of the work. Otherwise they will simply invite failure, and thus become disgusted with the pursuit.

By avoiding too high an idea of the financial possibilities of bee-keeping, many will save themselves a far and rapid fall, with its resultant bump.

The thing for all new recruits to do is to "make haste slowly," and thus be more likely to differ from the mushroom in their growth and lasting qualities as bee-keepers.

Unripe Honey—Quality vs. Quantity

Mr. R. A. Burnett, of R. A. Burnett & Co., of this city, who has had over 25 years' experience in handling honey, writes as follows:

> I have just read the article by Mr. E. D. Townsend, on "The Importance of Having Ripe Honey When it is Put Upon the Market."
>
> In the autumn of last year we sold a barrel of honey to a man who would use about 500 pounds per week. We had sampled one of the barrels of the lot and found it to be well-ripened honey, but as the lot was from different producers, having been consigned to us by a dealer, the barrel which he got proved to be of a low quality in flavor, wholly from the standpoint of having been extracted when the honey was not cured sufficiently to give it flavor, or prevent it separating so that there was about half a gallon of water in the barrel that had been exuded during the candying process. This caused the man to return the package, and the so-called water in a can. We endeavored to satisfy him by offering to substitute another package for it, but he felt that he could not afford to risk it, and said he had great difficulty in getting honey outside of one producer, whom he knew always had good honey. The result of it was, we lost a customer for honey, and the man who sent us this unripe honey missed the sale of several hundred pounds of his product.
>
> It is our opinion (which we have voiced for some years) that unripe honey has had more to do with the curtailment of its use by people generally than any other things combined, for when a person gets a coarse-grained, flavorless extracted honey, he does not like to throw it away, nor to return it to the vender, but keeps it around until everybody in the family tires of seeing honey, and gets out of the habit of using it, sometimes for years.
>
> If we fail to give people a good article, it will be time thrown away to try to convince them they should buy more of it. Producers of honey should be free from commercial selfishness to the extent that they should seek quality before quantity. We will venture the opinion that if the honey to be gathered in 1905 will be allowed to ripen in the hives before being offered for sale, the consumption of honey will be greatly enhanced, and also, if that is kept up without variation for the next five years, the amount consumed will be double what it has been in the past five years. It seems to me the remedy is very simple, in the fact that it lies wholly in the producer's hands.
>
> In conclusion I will say this: That beginning with the crop of this season, any unripe honey that comes to us will not be offered for sale, but held subject to the owner's orders. It might be that a unanimous understanding to this effect among honey-dealers would be a most effective means of stopping the unwarrantable greed of the producer who endeavors to market a product that will bring him money at the expense of all intelligent and honorable producers.
>
> R. A. BURNETT.

We think that Mr. Burnett's suggestion is a good one, that all honey-dealers agree not to receive unripe honey. Certainly they have it in their power to stop the shipment of such honey, and by all means should do so. Of course, no sensible bee-keeper would think for a moment of bottling unripe honey for the retail trade. If he did so, he would soon have no demand for it. And not only that, but such stuff will always kill the desire for any more honey of any kind. Unripe honey disgusts the consumer, and, in the end, is a loss to all concerned.

This danger is one that must be considered should the National Association ever furnish labels to its members. It could not afford to allow its name and guaranty to be used by any bee-keeper who is such a fraud as to put unripe honey on the market, knowingly.

◆

The New Honey-Producers' League

Under this heading Editor W. H. Putnam, of the Rural Bee-Keeper, has this to say:

> Bee-keepers and farmers have been for a long time learning how to produce honey. The industry has reached a critical point, where the supply seems to be greater than the demand. We, as bee-keepers, have been producing, we have sold our product for what it would fetch. Certain natural conditions have arisen which have brought up the price of supplies. Bee-keepers all over the land have entered a protest, and all agree that the price of supplies is too high compared with the price of honey.
>
> All dealers and manufacturers have heard so much about this subject that they have looked about for a remedy. They find that very few people comparatively are users of honey, and a great many do not even know its taste. They find cheap syrups (composed mostly of glucose) in every retail store, and flaming advertisements declaring that this poisonous concoction is better than honey. Many farmer bee-keepers are letting their bees go to the woods rather than buy hives and supplies at the present scale of prices.
>
> As every manufacturing industry must depend upon the prosperity of the consumer or producer, and one upon the other, the con-

sumer of bee-hives being the producer of honey, it was lately decided by some leading manufacturers and bee-journal publishers and honey-producers living in the vicinity of Chicago, Ill., that something must be done. The following article from the Secretary will explain what has been done. The next step will be, will the bee-keepers of this land take interest enough in their own business to co-operate with those who have taken the initiative in this movement to increase the demand and the price of honey? You will notice from reading the Constitution that the burden falls heaviest upon the manufacturers of supplies, and you will notice that they will do their utmost to support this movement. Why? These manufacturers are constant advertisers; they know the benefits to be derived from advertising, and they are willing to spend their money in that direction. We all know that there are approximately 100,000 people engaged in honey-production to one manufacturer of supplies. The manufacturers and editors can act only as a nucleus. The bee-keepers must swarm to make this movement—their movement—a success.

The selection of George W. York, of Chicago, as General Manager of this League is very opportune. Editor York is an advertising specialist, and a careful business man. We may all rest assured that our money will be well invested in advertising.

W. H. Putnam.

Then follows a copy of the Constitution and prospectus as they appeared in these columns a few weeks ago. We are glad the League is to have such hearty support as Editor Putnam indicates in the foregoing. We trust that, as he suggests, the bee-keepers will come to the defense of their own business, and join The Honey-Producers' League by the thousand. Surely, something needs to be done to stimulate a more general demand for honey.

◆

Best Hive-Entrance for Bees

"Swarthmore" says in the American Bee-Keeper:

> Bees prefer a one-inch auger-hole to all other forms of entrances. This may be proven by boring a hole into the back of any hive having a slot entrance at the front.

It might be worth while to know whether this is really the case; for, other things being equal, it is well to concede something to the preferences of the bees. Have any tried the experiment of boring a hole into the back of a hive having a slot entrance in front? and, if so, with what result? Yet if the bees should not take kindly to the new entrance at the back, it would hardly be proof that they have no preference for a round hole, for bees are creatures of habit, and are more likely to continue using the old entrance from habit, even if the new be better. If, however, they should show a preference for the new entrance, there would still remain the question whether the preference was due to the shape or the location of the entrance. A number of different experiments might be necessary to decide as to any positive preference.

Mr. C. G. Chevalier, of Maryland, sends us the following, taken from the Philadelphia Press, under the heading, "Nothing Serious:"

> Farmington—Ah! there's that old poem about husking bees. I always did like that.
> Dumley—Husking bees? What do you mean?
> Farmington—Why, were you never in the country during the season of husking bees?
> Dumley—No. How in the world do you husk a bee?

It seems to us that it might be something "serious" were one to try to "husk a bee."

Miscellaneous News Items

Mr. Geo. E. Bacon, representative of The G. B. Lewis Co., when in Chicago on business last week, made this office a brief call. He reports a good business in bee-supplies at their factory.

◆

A New Bee-Editor.—Arthur C. Miller has made his editorial bow in the American Bee-Keeper as associate with Harry E. Hill, who, for more than seven years, has occupied alone the tripod. Mr. Miller is well known as a vigorous writer, and the editorial utterances of the American Bee-Keeper, which have been by no means of the insipid order, are not likely to fall off in interest because of the new associate hand at the helm.

◆

The W. T. Falconer Mfg. Co., of Jamestown, N. Y., are the largest manufacturers of bee-keepers' supplies east of Ohio. We had the pleasure of visiting their splendid establishment last November. We began our tour of visiting some of the bee-supply manufacturers early last fall, and the Falconer Company was the one we closed our trips with at that time, though there are several more of them in the West that we want to see a little later on.

We were received by Mr. Falconer and Mr. Merrill with true Eastern cordiality. The former devoted all his time to us while we were there, taking us through the large factory, and showing us a great deal of their work in detail.

Besides bee-supplies, they make a great many advertising novelties and school supplies. They seem to be equipped to make almost anything and everything in wood. And their workmanship is simply superb. We believe we saw the most highly polished sections and some other articles that we ever saw anywhere. They were "as smooth as glass."

Mr. Falconer gave us quite a number of samples of their goods—in fact, he would have loaded us up like a country pack-peddler had we not declined most of his generous donations of samples. They were all so unique and beautiful, especially the advertising novelties and school appliances. We have since been able to make very happy several of our friends among the neighbors' children to whom we presented the samples, unfortunately not having any living children of our own. But we can assure The Falconer Company that their kindness to us we endeavored to "pass on" to others, and it was appreciated all along the line.

We are glad to be able to present to our readers the pictures of Mr. Falconer and Mr. Merrill, and also of their factory. We wish we could tell something more about the two gentlemen personally, but our repeated requests for biographical matter were good-naturedly declined, and so we and our readers will have to be satisfied with their pictures, both of which we think are excellent.

Should you ever go to Jamestown, N. Y., don't fail to call on The W. T. Falconer Mfg. Co., located at "Falconer," a delightful suburb about 3 miles east of Jamestown. You will receive a hearty welcome and most generous treatment. We did, and hope to go again some day.

Some Expert Opinion

Fresh Comb Foundation vs. Old

Ques. 26—*How much better is fresh foundation than that which is a year old?*

Adrian Getaz (Tenn.)—None at all.

G. M. Doolittle (N. Y.)—Not an iota.

L. Stachelhausen (Tex.)—No better at all.

O. O. Poppleton (Fla.)—In my practice, no better.

R. C. Aikin (Colo.)—I never could tell any difference.

Jas. A. Stone (Ill.)—Very little, if kept from dust and light.

Eugene Secor (Iowa)—I don't believe there is much difference.

J. M. Hambaugh (Calif.)—No better, if you will steam the old foundation.

E. D. Townsend (Mich.)—No difference, other conditions being the same.

Mrs. J. M. Null (Mo.)—No better if the latter has never been on the hive.

Morgan Bros. (S. Dak.)—There is no difference if kept in a warm, dark place.

N. E. France (Wis.)—No better, if the old is tempered or warmed a little before using.

C. P. Dadant (Ill.)—Not a particle. On the contrary, the latter may be a little more firm.

R. L. Taylor (Mich.)—But little if any better if the old has been carefully kept from dust, etc.

Arthur C. Miller (R. I.)—None, if the latter has been kept in a close package away from the air.

E. E. Hasty (Ohio)—I don't know, but as a matter of business I would pay 10 percent more if buying.

Rev. M. Mahin (Ind.)—I have not noticed any difference between that just made and that several years old.

Wm. McEvoy (Ont.)—I never found the fresh any better than the old when I dipped the old in water not too warm, just before using it.

P. H. Elwood (N. Y.)—When well kept in sheets, not very much difference. After having been on the hives, with us, as a rule, it is better to use fresh.

Prof. A. J. Cook (Calif.)—Practically I could never see much difference. Of course I should prefer fresh foundation, but I am not sure that it is any better.

G. W. Demaree (Ky.)—I really can't say, but I used last year some foundation over 5 years old, and it gave perfect satisfaction, but it had been in a close box all the time.

Dr. C. C. Miller (Ill.)—I suppose the fresh ought to be a *little* better, but hardly enough to notice the difference. I've used sections that had been filled with full sheets of foundation for five years, and they seemed to be as good as any.

E. WHITCOMB (Nebr.)—I have not been able to notice any difference. What we might call "fresh" may have been made a year or more before we came into possession of it.

C. H. DIBBERN (Ill.)—If it has not been exposed to light and air, it is no better. If the foundation is in the sections, and has been more or less soiled by the bees, it is not so good.

C. DAVENPORT (Minn.)—I don't believe there is any difference. I have some that will be 2 years old this season, and I would not give a cent a pound to exchange it for fresh-made.

S. T. PETTIT (Ont.)—I have used it at different ages up to 7 years old, and could see but little difference, if in the meantime it had been kept wrapped or boxed up from exposure to light and air.

J. A. GREEN (Colo.)—Guided by my bees' preferences, I prefer the fresh foundation, but it would be difficult to say how much difference there is. If the foundation has been left packed as it came from the factory—protected from air, dust and light—the difference is very slight. If it has been exposed to these agencies, it may be considerable.

DR. J. P. H. BROWN (Ga.)—Pretty hard to determine the *percent of "how much better?"* Bees take quicker to the fresh foundation because it is softer than the old. If the old is warmed and softened bees will work it quite as readily as the new.

E. S. LOVESY (Utah)—If it is made of pure beeswax, and if rightly made and nicely packed and preserved, I know of no difference. The greater portion of the foundation I used last year was 5 years old, and I never used any that gave me better satisfaction.

Contributed Special Articles

Hive-Buying and Hive-Making Symposium

A Few Opinions on this Important Subject

MAKING OR BUYING HIVES.

I have been interested in the controversy regarding making or buying hives. I made 8 hives with 2 supers each, and the same cost me $12.05 in the knock-down, where last year hives of better material and one super only cost me $1.15 each, freight paid. So, hereafter, when I want any hives some manufacturer will get my order. F. P. DAUM.

Henry Co., Mo., May 5.

HOME-MADE VS. FACTORY-MADE HIVES.

This, like any other question, has two sides to it. Judging from the recent articles in the Journal the question seems to be nearly settled in favor of factory-made hives.

I believe that for the man who has from 10 to 15 colonies, and has not previously had some kind of power and machinery on hand, it would certainly pay him to buy his hives from the factory. I do not think a man could make more than one 10-frame hive complete in a day with frames, bottom-board, cover and dummy, unless he had some kind of power and machinery. Counting that man's time worth, say $1.50, and the lumber and nails which will amount to 50 cents more, he has a hive which costs him $2.00, and very likely when he tries on the cover of some other hive, or its frames, he would sell his hand-made hive for $1.00.

But I think, on the other hand, that for the man who intends keeping bees as a business, and has from 25 colonies up, it would certainly pay him to buy a saw and some kind of power, and manufacture his own hives. By taking care in regard to gauges and measuring all parts before they are nailed together, he would have as good a hive as he can get from the factory, and I know from experience that one man can cut out material enough for 10 hives in one day. Counting that man's time as before at $1.50, and the lumber and nails at 50 cents per hive, he has a hive which costs him about 65 cents. The difference in this price from factory-made hives would soon pay for a man's machinery.

To sum up: I think a man with a few colonies (as it would not pay him to install machinery) would better buy his hives. But a man with from 25 to 50 colonies would save a good many dollars in buying the necessary machinery to build hives.

Of course, there are such things as sections, separators, etc., which it would not pay us to try to make, although I may just add I saw-cut my own plain separators.

Ontario, Canada. TOM THOMPSON.

MAKE HIVES OR BUY—WHICH?

"How are you, Mr. Smith? Did your bees go through the winter well?"

"Yes, Mr. Brown, they came through all right, but I hear everything is so high in the bee-supply line that I have decided to sell out."

"Yes, it is true there has been lots of talk on the subject in the bee-papers. I always try to look on both sides of a question, and especially on this one, as I have kept bees myself for the past 25 years. Of course, Mr. Smith, when you come right down to it, they've 'got us' on sections, and the less we say about that the better. We pay $5.00 a thousand for them, and get 70 pounds of wood which we sell at all the way from 10 to 20 cents a pound along with our honey. Suppose we get only 10 cents a pound for it, we receive $7.00 for what we pay $5.00, and we are $2.00 ahead on it at that.

"Last week I had to go up in Wisconsin to see my daughter, and as I happened to be near a town which has a large plant devoted to the manufacture of bee-supplies, I thought I'd just take a run up there and go through it. I was surprised to find so much lumber piled up all around. There must have been thousands and thousands of dollars worth there lying in a pile. Well, sir, I went through the factory from beginning to end, and watched about a hundred men at different machines, each man doing his little part. I saw one machine used just for piercing end-bars for Hoffman frames, and they tell me the cost of such a machine is about $500. One thing I noticed particularly, and that was the packing department. I saw three or four girls doing nothing but packing up nails. They do this all day long, and these nails are sent along with the hives to nail 'em up with. Why, I remember the time, years ago, when all we got to our hives was a lot of boards, supposed to be parts of the hive, and then a lot of frames were thrown in with these boards, and then when you got 'em you didn't know what you had. The lumber was poor and knotty. Nothing was marked to show what fit on what, and when you did put 'em together they wouldn't fit. Why, land of goodness, man, nowadays when a bee-keeper gets a hive from one of these big factories you'd think he was expecting a piano. If there's one-eighth inch difference in any one part he kicks, and they told me up there that a lot of these people ship the goods right back if they happen to be a sixteenth of an inch out of the way, and they aren't very often. When a man gets a hive nowadays he receives nice, clear white pine, every part marked and done up in packages, and then he gets a set of directions for putting the parts together, so that he couldn't make a mistake if he wanted to. His frames and inside furniture are all systematically put up. He is furnished tin and wire nails and everything he can need, even directions which tell him how many nails to use in every board. In fact, he gets everything, as a fellow told me the other day, but the hammer to nail 'em up with. And in the catalog all this means a hive.

"Yes, I know hives nowadays cost more than they used to, and some say they have doubled; but when I got on the train I was more perplexed than ever over this bee-supply proposition, only this time I couldn't figure out how they can afford to sell 'em as cheap as they do." JOHN ALLEN.

Lake Co., Ill.

MAKE OR BUY HIVES—WHICH?

I consider the American Bee Journal entirely right and most wise in recommending bee-keepers to buy their hives. (See editorial, page 291-292.) Yes, even to recommend that the "man who is exceptionally skillful in the use of tools, who makes hives in times that would be spent in the corner grocery, so that really nothing would be counted for his time," to buy his hives ready to nail together, rather than to make his own. Take a 2-story hive for comb honey, and there will be from 92 to 452 pieces in the completed hive. Now each and every single piece must be accurately measured, nearly every piece measured separately, which takes a great amount of time and is excessively tedious. I am considering the matter from the standpoint of making every hive in the apiary exact duplicates, so that any single piece of any hive will absolutely and perfectly fit any other hive, which, I think, every one will agree is what ought to be done by hand—another tedious job; then each piece must be planed on all four of its sides; and it will take an exceedingly careful and an extraordinarily good carpenter to make 100 pieces anywhere near mathematically alike. Even if he is so clever as to be able to do this, I still hold that he is wasting his time, for so expert a laborer could obtain the biggest kind of wages for his work, enough in a week to enable him to buy 30 or 40 hives.

No, sir! the best carpenter—the best cabinet-maker—using the best lumber to be had, is still wasting his time in making his own hives; and the better workman he is the more he is wasting when he tries with hand-labor to compete with machinery in turning out exact duplicates of anything. It takes too much time, entirely.

I would not think of making all my own hives, though I have the necessary tools and ability to do so, but will continue to buy till present prices are at least doubled, and I don't know that I would make my own even then. *Buy your hives* with every part accurately cut—to fit perfectly where each is meant to go, and to be interchangeable with any and every hive in the apiary. And this even without considering the question of cost. For the manufactured hives all cut by machinery are so far ahead of any that can be made by hand that they should be, and are, worth more money.

I can, and have, made exact duplicates of the manufactured hive, but at such a cost in time and labor, without counting the cost of the lumber and the waste of lumber, that I decidedly consider the hand-made hive, *when made as accurately as the machine-made hive*, to be absolutely prohibitively expensive. "A BEE-KEEPER IN VIRGINIA."

Augusta Co., Va.

P. S.—I have *no* connection with *any* manufactory, nor any supply-house, and am in no way concerned with the sale of any single appliance used by bee-keepers.

HOME-MADE BEE-SUPPLIES.

I have been quite interested in the controversy relating to bee-keepers making their own bee-hives, supers, etc., some claiming the manufacturers are charging too high a price for their goods, others that they can be made for less, and that, besides, one does not make as good an article as the factories turn out.

I have made my hives and fixtures for two years, and I am sure it pays me *well* to make them. I do not make them all by hand. I made a machine which cost me $3.00 for foundry work, and $2.00 for two 8-inch saws—$5.00 in all. It is very much the same as the foot-power machines advertised, only mine has the table rigid. I raise and lower the saw by a treadle, with stop to prevent cutting beyond the proper depth, and when through it drops below the table out of the way. Or the saw is made rigid by tightening a thumb-screw, holding the saw-frame solid between the legs of the machine. My saw is run by a power wind-mill 16 feet. The saw makes as many as 5000 revolutions a minute, and cuts as smooth as a plane.

To make 4 supers, I take one board 10 inches by 12 feet—second clear lumber, costing $26 per 1000 feet, which would make the one board cost 26 cents; 8 flat tins 4 cents—total, 30 cents, or 7½ cents per super. These are listed in most of the catalogs at 10 in the flat for $4.00. The same things cost me 75 cents. Of course I have made no account of work, but as I could cut out 300 supers a day, that would not increase the cost very much, even if my time was very valuable, which it is not. This estimate applied to hives holds equally as good. Thus, it would seem that there is a fine profit for somebody. Of course the large bee-hive concerns probably get their lumber cheaper than I do, but they are to an enormous expense for machinery, skilled labor, and many other items which go to swell the amount.

I am not finding fault with the prices quoted by any manufacturer of bee-supplies. I simply claim that it pays one to make his own hives and fixtures as far as he can. There are some things that it is better to buy than to make, such as sections, fences, and wood or tin separators. I would not want to make my own hives by hand-work alone, but would rather pay the prices asked than to tackle that, as it makes me nervous. I tried it once. I should like to hear through the American Bee Journal from others who have tried making their own hives. A. D. HUSON.

Sheboygan Co., Wis., April 24.

Some Facts About Honey and Bees.—This is the subject of an article written by Mr. J. E. Johnson, and published on pages 581-82 of the American Bee Journal for Aug. 25, 1904. We have republished it in 4-page leaflet form for general distribution, and furnish it, postpaid, at 35 cents per 100 copies. Send all orders to the office of the American Bee Journal

Season of 1904—Swarming Management

BY C. DAVENPORT

THE honey crop here last year was light, and the word "light" in this case may be used in a double sense, as the crop was light in quantity and color. Hardly any dark or amber honey was gathered last fall, and last winter, or rather spring, there was a severe loss of bees. With one exception I never had bees spring dwindle like they did last spring. What caused it is more than I know. The weather and early spring flows were not very favorable. But I have seen the conditions worse, when no spring dwindling to amount to anything occurred. The previous fall enough fall honey was gathered to keep brood-rearing up in good shape, so it was not the lack of young bees that caused this loss last spring.

I have noticed that a good many think that if no fall honey is secured to keep up brood-rearing late, so that the colonies go into winter quarters without many young bees, that spring dwindling will, or is apt to, result. This looks very reasonable, and may be the case in most instances.

But I well remember one fall when no fall honey was gathered, and brood-rearing stopped earlier than I ever knew it to do before or since. I expected that there would be a heavy loss the next spring, but I never had bees come through the spring, or build up better, than they did.

I think that it was 10 years ago last spring that there was the most severe spring loss of bees around here that there has been in my time. The late Mr. B. Taylor, the most prominent apiarist in our State at that time, in writing about his severe loss, said that it was his Waterloo. Mr. Taylor thought that the great loss was because not enough young bees were reared late the previous fall; but in my own yards enough fall honey was secured to keep brood-rearing up late, so in neither case was it a lack of young bees that caused my own severe loss of bees by spring dwindling.

Now, owing to the loss of bees last spring, and the light crop gathered by what were left, the season was, in a financial way, the poorest I have known in a good many years. In other ways though—"those things we would not sell for money"—it was far different.

In the first place, I have finally found a *practical* way to render comb into wax and secure all the wax, no matter how old the comb is. I have spent what is, for a bee-keeper, a large amount of money, besides a large amount of work and time, over this problem, and I am glad to say that I have solved it. No machine or screw press is used, yet I can render more wax from *any* kind of comb and leave less wax in the slumgum than can be done with any press machine that is made, or can be made and operated by one man.

But this is a small matter compared to what I learned, or rather verified last season in regard to artificial swarming. As a good many who will read this know, I am a specialist, and devote my whole time to our pursuit, and that I have for a good many years practiced artificial swarming. Some 10 or 12 years ago, in the American Bee Journal, I described my method, which was, in brief, to remove all the brood. Not much attention was paid to it at the time, and what comment there was about it was unfavorable, but of late this matter has been given a good deal of prominence in all our journals under the names of "shook" or "brushed" swarms. Of course, it makes no difference whether the bees are shaken or brushed, the essential principle is to remove all the brood, for if all the brood is not removed, the colony, if it has contracted the swarming fever, will be very apt to swarm in a few days if only one frame is left. I preferred this method to natural swarming, but one very great objection to it is that a colony swarmed by this "shook" or brushed plan is very apt to swarm out again the next day, and sometimes they will swarm out a number of times before settling down to work; and in some cases, if they do not swarm out, they sulk or refuse to work much for a number of days. And, again, others "swarmed" in this way *never* work with any vim or energy.

But the swarming out is the worst part, for in a large yard, where a large number of colonies have been swarmed one day, the next day there may be a dozen swarms all out in a snarl together. Here, just as sure as fate, if a colony is swarmed by this method, after they have a queen-cell sealed they will swarm out. I never knew an exception to this in all the years I have practiced swarming in this way. There must, though, be a difference—shall I use our old stand-by, "locality?"—in regard to this swarming out, for some have reported through the journals that they had no trouble in this respect, while others have had, and last fall, while at our State Fair, I met a good many bee-keepers from this State, and also a number from Wisconsin, and I talked with all of them about this, and every one of them that takes a bee-paper had tried this shook-swarm method. Some had trouble with swarms deserting, and some because they would not work, and I met only two who called the method a success.

I have for years, during the swarming season, thought, studied, worked, and even dreamed nights, about some plan or way that colonies could be swarmed so as to overcome the objections I have named, but even in my dreams I never hoped or expected to obtain the success I have secured. In reality, though, no credit is due me, for it was not any of the countless plans, methods, or devices I tried with this object in view that was the means of my discovering this method—a method or plan which is such a singular success that I suppose but few will believe what I shall say about it. At least I, who have spent practically all my life with bees, would not believe what I shall say if I had not the proof of my own experience.

A year ago last summer I was going to "swarm" a colony, but upon examining the bees I saw they had two or three queen-cells, so, as I knew that they would swarm out the next day anyway, they were not swarmed in the regular way; simply in order to save work they were handled in a different way, and I expected, of course, that they would swarm out, but they did not, though I could hardly believe the reason was on account of the way they happened to be treated. But the fact remained, that instead of swarming out they went to work with all the vim and energy of a natural swarm that is fully satisfied with its new home.

Southern Minnesota.

(Concluded next week.)

❖

Best Bee-Hive—Prices of Bees

BY DR. G. BOHRER

ON page 21, Mr. Latham asks what is the best bee-hive, and uses all his argument in support of two objects, one being the closed-end frame, and the other a frame hanging crosswise of the hive.

If there is any advantage in favor of the closed-end frame the standard Langstroth can be made in that way, or the Hoffman can be made with the entire end closed quite as easily, and at little, if any, more expense than the way we now have it. In wintering on the summer stands a closed-end frame may afford a slight advantage, but I doubt it, for the reason that if the walls of a hive were made so as to have two or even three dead air-spaces the combs would be covered with frost in cold climates, if left on the summer stands over winter.

The first and most important point to be looked after in outdoor wintering is to keep the bees from rain, snow and wind. Then with sufficient honey for their subsistence within easy access, they will winter through several weeks of zero weather. But if they are cut off from their stores by frost they will starve out. The crosswise frame as used by Mr. Latham has no advantage over the standard Langstroth frame, except possibly a very slight one which is in the matter of its being 2 inches deeper, and of course will put the honey directly above the bees. What the Langstroth frame lacks in depth it a little more than makes up for in length for honey space, which, with the rear end of the hive being raised 2 to 4 inches higher than the front makes the honey about as accessible to the bees, if not fully as much so, as it is in the crosswise frames.

I talked to both Mr. Langstroth and Mr. Quinby concerning the difference between the length and depth of their comb frames. Mr. Langstroth took the ground that the depth and length of his frame, with 10 frames to a hive, afforded about as much space in the brood-nest as the average queen and colony could populate, and yield a profitable surplus to their owner, and that the space on top of such a hive was ample for storing a large surplus. Mr. Quinby held that in New York, where he lived, and north of that, the winters were severe and protracted, and that he felt that to add about 2 inches to the depth of the Langstroth frame, and one inch or more to the length, would make the matter of wintering on the summer stands somewhat safer than would be the case with the shallower frame. He, of course, like Mr. Langstroth, advised that the rear end of the hive be raised several inches, which would place the stores more nearly directly over the cluster of bees.

The cost is admitted to be greater in the crosswise hive, and also that it takes more time to handle the frames. As to a greater current of air having access to the bees in the Langstroth hive than in the crosswise-framed hive, there is certainly little, if anything, in favor of the crosswise frame. For during cold weather the entrance of either should be contracted so as to admit only sufficient air to afford the colony good ventilation.

Hives of every conceivable shape and many different depths have been tested, but none of them has ever displaced the old standard frame invented and given to us by that greatest of all bee-keepers and hive-inventors.

But I wish to say that there is one apparently unsurmountable difficulty in regard to the Hoffman frame, namely, it will cause many bees to be crushed. I have tried to be as careful as it seems possible to be in handling them, and have never been able to avoid killing more bees than are killed by the plain standard Langstroth frame spaced, with staple driven in the end-bar or top-bar near the end.

SPRING AND FALL PRICES OF BEES.

On page 245, widely different spring and fall prices of a colony of bees are given. Let us consider it.

An 8-frame 1½-story hive, nailed and painted, with one-inch starters, is quoted in catalogs at $2.65; add to this for freight 35 cents; honey on March 1, 15 pounds $1.50; bees on March 1, $1.50, making a total of $6 00. In the fall add 15 pounds more honey at $1.50, and this will make the fall price $7.50. I think $1.50 for the bees of a colony is a very moderate price, and honey at 10 cents per pound—that is, honey suitable for wintering bees—is not an over-estimate, and 30 pounds for wintering a good colony of bees in an 8-frame hive is also a fair estimate, it seems to me, and certainly not by any means an over-estimate.

Lyons Co., Kans., April 1.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

The Wonderful (?) Cotton "Controllable" Hive

About 25 years ago a hive with a woman's name attached was somewhat extensively advertised for which large claims were made, and no little was said in the bee-papers about Mrs. Lizzie E. Cotton and her Controllable hive, the general belief seeming to be that there was very little of any woman in the case beyond a man using his wife's name. Little has been heard of Mrs. Cotton and her hive for some years, but lately it seems to be coming to the surface again.

A circular about "The Controllable Hive, Improved Bees, and New System of Bee-Keeping," is to hand, which starts out by saying that owing to poor health Mrs. Cotton has transferred her interest in "The New System of Bee-Keeping" to her husband, C. B. Cotton. But just as great things can be done with the hive now as 25 years ago. Get the improved bees in the Controllable hive, and "your success in the end, and your profits of the first season are greater from one swarm of these bees in this hive than from 6 swarms of bees in any other hive." Hive with outfit ready to receive a swarm of bees, $6.00. The same with a "full swarm of Improved Bees," $20. That's only $14 for the bees alone!

The following letter has also been received:

MAINE, Dec. 24, 1904.

MISS WILSON:—Should like to introduce the Controllable Hive and Improved System of Bee-Keeping to the people of Illinois. If you will favor me withyour order for a Controllable hive and complete outfit on receipt of this letter, I will furnish you on receipt of $4.00—regular price $6.00—*providing* you will recommend to your friends, if hive pleases you, as I am certain it will.

I refer to F. G. Adams, of ——, Iowa. Mr. Adams has had the hive in use more than 20 years.

Don't delay if you want the hive and outfit at this reduced price. Yours truly,

C. B. COTTON.

To which has been sent the following reply:

Dear Sir:—In reply to your recent letter, I would say that it is considerable trouble to test unknown things, and would suggest the following arrangement: You send me free, with all charges for carriage prepaid, your complete $6.00 outfit of hive, etc., together with $2.50 to pay for the trouble of testing, and if upon trial its great superiority is shown, I will cheerfully recommend it to my friends. EMMA WILSON.

The strange thing in the case is that after 25 years of publicity such a wonderful hive would need to be *introduced* "to the people of Illinois," or of any other State. Strange, too, that not a man of those who make their bread and butter by producing honey seems to have gotten hold of this great improvement by which their profits could be increased sixfold!

Delightful Weather for Bees

We are having delightful weather, and the bees are enjoying it most thoroughly. They are in fine condition, no weaklings this spring, just strong, vigorous colonies. Plums and cherries in full bloom May 3, with the thermometer at 85 degrees. Pretty good weather for bees, but then we may be having frost ere many days—can't tell.

Honey as a Soap Substitute

Honey is said to be as good as soap for cleansing the hands. Directions are to rub it on when the skin is dry, moisten a little and rub again, use more water and rubbing, and finally wash thoroughly when the hands will be as clean as though the strongest compound of grease and lye were used.—The Farmers' Review.

I did not have very much faith in the cleansing properties of anything as sticky as honey, but concluded to give it a fair trial. Say, it works better than you may think it would. Give it a trial and see.

A Sister's Well-Ripened Honey

Mr. A. I. Root, in his notes of travel, gives an interesting account of the success of a sister bee-keeper in northern Michigan. She not only takes the entire charge of between 50 and 60 colonies of bees and secures good crops of honey, but adds to that the honor of producing a *very superior article*. Score one for the sisters. Mr. Root says:

"It was my privilege to stay over night at the home of Mrs. Morrow, who has between 50 and 60 colonies of bees, but as neither her husband nor one of the children take to bees, she manages them entirely herself. She has secured good crops of honey, and, strange to tell, her honey never candies. It is stored in sap-pails with a cloth tied over the top; and on a frosty morning you can turn the pail of honey upside down and not spill a drop, it is so thick, and yet it is just as clear as glass. For quality it suited me so well I took a bottle of it home to show our Medina folks what good, thick honey is like. The only explanation she could give for the fact that her honey does not candy, while the raspberry honey of that region is celebrated for candying solid as soon as cold weather comes, is that her extracting is all done late in the fall. She just piles the hives up one story on top of another, so as to give the bees room. When extracting time comes, the combs are taken into a warm room, and kept there long enough to get well warmed through. The room is kept at a pretty high temperature where the extracting is done, because the honey is so thick it is a pretty hard matter to throw it out.

"Of course, there are other bee-keepers, many of them, working on this plan. The honey is better ripened, a good deal, than the average comb honey, especially comb honey that is taken from the hive before it is soiled by the bees tramping over it. And I for one do not want any more comb honey so long as I can get Mrs. Morrow's extracted. I have submitted my sample to a good many people since then, and they pretty much all agree with me. The honey is so thick it is difficult to get it out of the bottle without warming, or letting it stand in a warm room. Of course, such thick honey ought to bring more money than the ordinary liquid honey on the market; but I for one would be willing to pay for it."

A Little Sister's Report

Dear Miss Wilson:—I will answer Dr. Miller. He wanted to know where his little Abel girl was. I am sorry to tell you that my sister "Hope" died on Aug. 16, 1904. She was 10 years, 8 months, and 3 days old. The queen that she ordered is still alive. She is rearing brood, and is in the strongest colony. We have 16 colonies. We lost one colony the past winter. We had a very long and cold winter. Papa had all the bee-hives opened on April 20, and all are in good condition. The weather is changeable, one day freezing, the next day warm, and the next day raining. My sister got that queen from Mr. York on Aug. 13, but she never saw it. Now I must help papa in her place. I will be 9 years old Sept. 16. My papa's name is E. W. Abel.

Florence M. Abel.

Northampton Co., Pa., April 22.

Thank you very much for your nice little letter. Write again; we are always glad to hear from the girls. I am sure the sisters will all unite with me in extending our sympathy for the loss of your sister. "Papa" is to be congratulated that he has another little girl so willing to fill her place.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

WINTERING OBSERVATORY HIVES.

Dr. Miller was not the only one to be surprised at Allen Latham's success in wintering observatory colonies. Well for us to inquire a little into the why of this success. Mr. L. himself thinks it's partly owing to stimulation late in the fall—that is, into October. This is reasonable; yet I do not feel absolutely sure that extra-late breeding counts for very much. I conjecture that the all-along *prosperity* of the colony (as shown by their swarming) is the main element. Page 261.

THE BEE-KEEPERS' HIVE-TOOL.

Apropos to F. Greiner's new tool made of a piece of buggy-spring, it is apparently better than the prevalent putty-knife as a lever; but it does not remedy the worst short-coming of the putty-knife for the work of removing burr-comb. As human knuckles must have room to move along in, the operating edge is continually being crowded down in spite of us against the wood of the frames—and snub right into the wood. Can't you have the tool made a little longer, with one end drawn to a screw-driver shape for the lever work, and a bend of 30 or 40 degrees put in it two or three inches from the broad end?

Oft we want to remove wax and burrs from combs that are not in the possession of bees. It naturally occurs to one that an old table-knife is the proper tool to do it with. You try it and get mad. Even a very dull knife won't travel in beeswax if it can find wood to plunge aside into. One of the queer perversities of materials and tools. Page 262.

HIVING BEES ON FULL SET OF DRONE-COMBS

I think some one has said that bees are decidedly inclined to leave if hived on a full set of drone-combs. Mr. Greiner goes on record that they don't always do it, but sometimes go ahead and rear a lot of worker-brood in the drone-comb. Curious. Old bee-writings sometimes tell of bees tearing down drone-comb and rebuilding in worker size (that's what human beings would do, of course), but who can tell time and place where bees ever actually did that? Page 262.

PUTTING WEAK COLONIES OVER STRONG ONES.

That sub-head on page 262, "Uniting weak colonies in the spring," is wrong. It means putting weak colonies over strong ones without uniting—a kink decidedly off the old, familiar track. What about it? It seems that two of the Michigan folks who tried it largely like it. The apparent advantage is that a queen, which in all probability would have been lost, is saved. The apparent disadvantage is that the lower colony's heat is used and much of it liable to be wasted. None seem to report any fighting, which is curious. Presumably some of the upper colony's bees desert when put back to the old stand, but not nearly enough to offset the gain realized by three weeks of parasite life. I suppose they not only go through the premises of their stronger neighbors, but help themselves to much that they find there. And according to page 307, bees from below often come up and help in the work. But don't forget that the inventor (E. W. Alexander) warns us that queens will be killed if such pairs are kept together too long.

DO BEES EVER SMOTHER?

Bees never smother, eh? The backer of that, George E. Hilton, seems inclined to push Hutchinson in the heresy contest. The essential fact in this connection is that excited bees need a great amount of air, and if they can not have it they very speedily perish, while perfectly quiet bees will do very well with no more air than will go right through ice, or bricks, or boards. Whether a colony lives or dies is very often a mere matter of feeling and deportment with them. No harm to shut bees in unless the bees themselves object to it—but if they do, then look out.

In somewhat similar manner banking with snow is good—unless—unless it sets them to breeding, as it frequently does. If this takes place look out—look out and see a "blasted hopes" apiary. I imagine that the air which filters through snow is too stimulating—too much ozone in it. Page 263.

CROSSING CROSS BEES WITH CYPRIANS.

So "South Carolina" crossed his cross bees with Cyprians, thinking to make them gentle! Next he'll be crossing his hens with Dominiques to make them non-sitters. Some eminent bee-folks have the "gall" to claim that *pure* Cyprians are gentle; but I think they mostly give it up about the mixed bloods. Page 265.

Feeding Bees in the Cellar

Sugar syrup may be given to bees in the cellar with the regular division-board feeder of the Doolittle type. It would be advisable, as you suggest, to put the feeder in the middle of the brood-nest; but a better way would be to give the bees cakes of hard candy. The candy should be made by boiling granulated-sugar syrup, with a little honey in it, so that, when cool, it will form into a hard-translucent cake. A two or three pound brick of this when put on top of the brood-frames will be enough to take care of any colony short of stores.—Gleanings in Bee-Culture.

Comb Honey in Confectionery

I have been unable to learn anything further about the way in which comb honey is used in confectionery, owing to the absence from home of the friend who sold the honey for this purpose; but I imagine that, like most soft candies, it is made with but a moderate amount of cooking and a great deal of stirring, especially just after it is removed from the fire. In this manner the wax is thoroughly mixed through the candy, and helps a very soft candy to keep its shape instead of melting down and becoming sticky with the changes of temperature and moisture. Paraffine is sometimes used for this purpose; but the comb honey, containing wax in about the right proportion, already finely divided and well mixed through the mass, is probably less trouble, besides being superior in other respects.—J. A. Green, in Gleanings in Bee-Culture.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to DR. C. C. MILLER, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Preventing Swarming

Given a 10-frame Langstroth hive and 3 supers of 8 combs each, at clover time, raise 4 frames of brood to the first super, place 4 combs in their stead, and over this place a queen-excluder. Will such a colony be apt to swarm? MISSOURI.

ANSWER.—I don't know, but I should expect swarming in a minority of cases, if everything is closed except the entrance. With an opening at each story, allowing abundant ventilation, there might be no swarming.

Corn and Sumac Honey—Hoffman Frame Honey Capacity—Melting Combs Containing Honey

1. Does corn yield honey? If so, is it not of poor flavor?
2. What kind and of what grade is sumac honey?
3. How much honey does an ordinary Hoffman frame hold when there are 8 in an 8-frame hive?
4. How do you melt combs with honey in? perhaps you'll say, just like any other comb; if that's the way, where will the honey go?

NEBRASKA.

ANSWERS.—1. Sometimes it yields nectar in the axils of the leaves; but I don't know about the quality.

2. I don't know. In this part of the country it is in such small quantity that it would probably be impossible to get a sample of it pure.

3. I think something like 5 pounds.

4. Not at all "like any other comb," if you want the honey saved in good condition. You must melt it very slowly, so the heat will not spoil the honey. Put it in a crock on the hot-water reservoir of the cook-stove, where it will take several days to melt; or put it in the oven *if* you are sure it will not get too hot; or set the crock in a dish of water on the top of the stove, with a chip or piece of shingle, or something of the kind, under the crock.

Keeping Queens—Swarming—Foul or Black Brood

1. We are told that when we have a queen we do not want to use at present, to put her into a nucleus until we do want her. How are we to have these nuclei on hand just when wanted, and what are we to do with them after we take the queen away?

2. When rearing queens, when are the cells put into Titoff cages—as soon as the prepared cells are put into the hive, or when cells are sealed up?

3. How soon are cells sealed after given to bees?

4. What is your opinion on the Alexander method of controlling swarming, described in Gleanings of April 15?

5. How are queens reared in a baby nucleus? I often see it mentioned in the Bee Journal, but never saw any directions on the subject.

6. Does "baby nucleus" mean simply an ordinary hive with a few frames in, or a small hive full of frames?

7. Some of my bees that died last winter, and also some which did not die, had small patches of dead brood. It was not sunken into a brown mass as described in foul brood, but retained its shape. Some of it was black and some brown, but all was very soft and seemed decayed. Is it foul or black brood, and if not, is it ever likely to turn into either?

8. Would 1⅞-inch sections, with plain separators, hold a pound of honey? If not, how much would they hold?

9. Do you think it likely that some disease would be the cause of 47 colonies dying last winter and spring in one apiary of about 60 colonies? This was the case with one apiary in the county. All had plenty of honey.

10. Would it be advisable to call in the inspector? ONTARIO.

ANSWERS.—1. I know of no way of having nuclei but to make them; one way being to fasten one or more frames of brood with adhering bees in a hive for 2 or more days.

2. Cells are not usually caged until nearly time for the young queens to emerge.

3. They are sealed 5 or 6 days after the larva hatches from the egg.

4. The plan seems to be good *if* you can, as he says, have 2 good, strong colonies in the place of one, ready to commence work on your clover harvest.

5. Just about the same as in larger nuclei.

6. Any nucleus with a very small number of bees is a baby nucleus; but the term is usually applied to a nucleus in a small hive, with one or two very small frames.

7. It may be neither. It will not turn into foul or black brood unless it was foul or black brood in the beginning.

8. There is no such thing as a given weight of honey in a section of a given size. The section you name would sometimes hold a pound of honey, and sometimes more.

9. Possible, but hardly probable.

10. It would do no harm.

Prevention of Increase

1. If one has all the bees he wishes for, and does not care for any increase, how would it do, about the time bees are ready to swarm naturally, to destroy all queen-cells and put on a super so as to give them more room? Do you think the plan would generally be successful?

2. Does a second swarm generally leave the hive the next day, if fair, after the first piping of the queen the evening before?

NEW HAMPSHIRE.

ANSWERS.—1. In the majority of cases it would merely defer the time of swarming. Something, however, depends upon the character of the bees. With colonies given to swarming it would nearly always prove a failure; with those little given to swarming it would often prove a success.

2. Yes.

Clothing for Bee-Work—Bottom-Boards—Frames Full of Honey—Lemon-Juice in Sugar-Syrup—Dead Bees—Mice and Snakes in the Hives

1. I think it is a pity that a man who has done so much to help others should be so slow as to wear cotton clothing in hot weather, and suffer with the heat and perspiration when light wool clothes are so much cooler. They let the air through and are less clinging. Try it, and if you don't enjoy yourself better this summer, provided you get light-weight wool, light gray in color, I will let you go back to your old white cotton.

2. Why do you put a false bottom-board in the hives with the deep bottom-boards in summer?

3. Some of the hives seem to be almost full of honey. Perhaps it was robbed out of other hives. Would it be well to take away part of this and give empty combs instead?

4. All of the colonies except one are gathering pollen every fine day. This one has a good-looking and lively queen, but no brood. Will she begin laying?

5. One man says to put lemon-juice in sugar-syrup and make it as good as honey for the bees. What do you think of it?

6. There are a great many dead bees about some of the hives and not nearly so many about others, and yet it seems to me that the colonies with the great amount of dead bees are about as populous as any. How do you account for this?

7. Some colonies that I thought in pretty good condition in the fall are dead. Not from cold or hunger, but there are very many dead bees in and under the hives with a hole in the middle of their backs, and all the inside eaten out of that part of the bee. It looks like too small work for mice, and, in fact, I had contracted the entrance too narrow to admit a mouse, and yet I can not find it. What do you think it is?

8. Last fall and this spring there have been a great many small snakes around here. I do not know whether it is to eat bees or because the hive makes an excellent shelter for them, or because they are after mice. Do you think they are friends, or enemies? I used to kill them, but don't any more for I think they eat many mice. NEBRASKA.

ANSWERS.—1. There's just one fatal objection to the woolen clothing; bees sting worse.

2. Because the bees in summer would fill the space with comb.

3. It might be well to do so if you find that the queen has not room to lay, but you will find the bees will use up a good deal of honey in brood-rearing.

4. The likelihood is that a queen with no brood, when others have plenty, is of no value.

5. It would be better without the lemon-juice.

6. A very strong colony might have a good many more dead bees than a weak one merely because it had more old bees to die from old age.

7. In spite of appearances to the contrary, you may be sure that mice are the culprits.

8. I have seen snakes in hives a number of times, and have always supposed it was merely to have a comfortable place.

Transferring Bees—Foundation Splints—Moving Bees

On page 297, in answering "New York" concerning transferring bees, you thought it would be better to wait till they swarmed, and 21 days later break up the old colony.

1. What should be done with the bees at the end of 21 days?

2. Would it be a good thing to move the box-hive to another part of the yard so as to deplete the number of bees as much as possible before breaking up the old colony?

3. Four different times I have tried upsetting the hive and then drumming, as is recommended in bee-books; but it did not work well. We drummed an hour each time, looking at intervals under the box to see if they were up. About a pint was all we could get. What was the matter?

4. What are foundation splints that you use instead of wire? How are they used?

5. Would it be better to move bees 45 miles by wagon than to have to change cars with them? MICHIGAN.

ANSWERS.—1. One way is to drum out the bees and unite them with the swarm at the end of the 21 days, making kindling-wood of the hive, and wax of the combs. Another is to transfer into a new hive, and keep the 2 colonies separate. Still another way is to do nothing further, leaving the colony in the box-hive to build up and cast a swarm again the next year.

2. Yes, you are to move the old hive to a new stand a week or so after swarming.

3. I don't know. Possibly you were too gentle in smoking and jarring. It is also possible that there were so few bees in the hive that you could not get up a stampede.

4. Little sticks of wood about 1-16-inch square and ¼-inch shorter than the inside depth of the frame. They are boiled in wax,

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14Atf Please mention Bee Journal when writing.

and with a pair of tweezers lifted out of the hot wax and imbedded vertically in the foundation by means of the wet edge of a little board.

5. It's rather a question as to which will cost less. Changing cars need not be a serious matter.

Italianizing Bees

I want to Italianize 2 colonies of blacks in double hive-bodies, Danzenbaker size, by giving capped cells.

1. How would it work to put a queen-excluder between the 2, with the old queen in one and the cell in the other?

2. Should the cell be above or below?

3. Could I not put the cell below with one entrance also below, and get the young queen fertilized and laying before removing the old queen? or, would it be better to have an opening for the upper story?

4. Wouldn't they be likely to swarm if the old queen could get out?

5. Would the bees destroy the cell if not placed in a cell-protector?

Of course, if the first question is not practical, the others need no answer. I got the idea from an article by Doolittle on queen-rearing, where he has cells completed in a hive with a laying queen. My idea is to do this just before the honey-flow begins, and I want to keep the old queen at work as long as possible, you see. NEW YORK.

ANSWER.—Please allow me to answer your questions in a bunch. I have been able to have a young queen fertilized in one story while the old queen is laying in another, but generally she turns up missing about that time, although there is no trouble in having a young queen mature in that way. I'm not sure what becomes of the young queen after she is a few days old. You will not generally find that the colony will swarm on account of the presence of the young queen. I *think* you would not come very far from what you desire in something like this way: Put a cell in either upper or lower story, with the queen in the other story, and a separator between. When the young queen is 3 or 4 days old remove the old queen and the separator.

—ITALIAN—
Bees, Queens and Nuclei

Choice home-bred and imported stock. All queens reared in full colonies.

One untested queen	$1.10
One tested queen	1.50
One select tested queen	1.65
One breeding queen	2.75
One comb nucleus (no queen)	1.40

Untested ready in May; all others ready now from last season's rearing.

Safe arrival guaranteed.

For prices on quantities and description of each grade of Queens, send for free price-list. J. L. STRONG.
204 East Logan Street, CLARINDA, IOWA.
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Within a hundred miles of me are over ¾ of the bee-keepers of Michigan. I am on the Pere Marquette R.R., which completely covers this region. Root's Goods, Factory Prices, Prompt Service, Low Freight. Send for Catalog.

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15A12t FREMONT, MICH.

BLACK BREASTED RED GAMES—"The KING of Poultry." Large size, good layers of finest eggs. Hardy and fearless, the best all purpose fowl. Willow legs and Bay eyes. Illustrated circular. 25th year. H. H. FLICK, MANCHESTER, MD.

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Reports and Experiences

Bees in Fine Condition

Bees are in fine condition for this time of the year, as I never saw them winter any nicer. Out of 112 colonies I lost only 2. They are commencing to bring in pollen, and otherwise enjoying themselves after their long winter's nap.

I enjoy reading the American Bee Journal, and look forward to every Thursday, as I know that is the day it will come.

WARREN H. WINCH.

Delaware Co., Iowa, April 3.

Cool Weather for Bees

It is too cool for bees. There was a 50 percent. general loss of bees this spring. I lost about 15 percent. White clover is in abundance.

H. W. HECKLER.

Keokuk Co., Iowa, May 8.

Georgia as a Honey Country

In reply to the request for information concerning the eastern part of Georgia as a bee and honey country, I will say that bee-keeping is profitable in the eastern part, and there are many locations where the business would be very paying. These localities would be found mostly in the south-eastern portion.

We get our surplus honey mostly from the following sources: Gallberry, poplar, gums, holly, sumac, and golden-rod. With these plants in a location, I would be glad at any time to furnish more information concerning Georgia as a honey-producing State.

J. J. WILDER.

Dooky Co., Ga., April 24.

Wintered Well and Good Prospect

The bees have wintered very well, and the prospect is fairly good for a honey crop.

B. KENNEDY.

Winnebago Co., Ill., May 1.

A Beginner Heard From

I am a beginner in bee-keeping, having purchased the first colony last June. They were Italians, and showed that they were expert swarmers. They swarmed 5 times, 2 swarms

BEES FOR SALE Owner Leaving Texas

Has listed us with 450 colonies of bees in 10-frame dovetailed hives, fully equipped, high-grade bees, already located. Will sell all or part. Inquire quick.

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WANTED Position to work in apiary, by young man; single, with not much experience. Will buy interest in apiary, or work for wages. Address, with full particulars,
J. C. WHITMORE,
20Atf 222 S. Lincoln St., MUNCIE, IND.

Nuclei For Sale

Good, heavy, strong, three-frame Nuclei with Queens, on L. frames—after May 20, $2.00 each, f.o.b. railroad. Safe arrival guaranteed. No foul brood in our country. M. O. office, Cedar View, Miss.
W. T. LEWIS,
20A2t LEWISBURGH, MISS.

FOR SALE

50 colonies of Italian and Carniolan BEES for sale, all in 1½-story 8-frame hives, nearly new, and all in good condition. One to 5 colonies, $5 each. For larger lots write for price, with stamp enclosed.
WM. J. HEALY,
18A4t MINERAL POINT, Iowa Co., WIS.

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It costs you no more We furnish them on short notice

Untested, 75 cents each; $4 for 6; or $7.50 per dozen. Tested, $1.25 each. Breeders, $3.
Nuclei—1 frame with queen, $1.50; 2-frame, $2; 3-frame, $2.50.
Absolute satisfaction or no deal. We breed 6 pure races. Price-list describing them free.
We are agents for the **Dittmer Comb Foundation** for this State, and all that are nearer us than them, at Dittmer's prices. If you wish your Wax worked up into Foundation for cash, we will receive same and furnish you the Foundation from our stock, which will save you much time and freight.

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Is there any better proof than this, that we satisfy and please our customers?
We have the facilities, the experience, and just the kind of goods you want.
They are the ROOT GOODS, and we sell them at Des Moines at Factory Prices.
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8A5t—14E5t

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VIRGINIA QUEENS Italian Queens secured by a cross, and years of careful selection from red-clover queens and superior stock obtained from W. Z. Hutchinson. Untested queens, 75c; after June 15, 60c; tested queens, $1.00; after June 15, 75c; selected tested queens, $1 25; after June 15, $1.00. Write postal card for circular. **CHAS. KOEPPEN.**
17A26t FREDERICKSBURG, VA.

Wanted BEES in shipping-boxes on L. or Danz. frames ready to ship now. State kind, price, safe arrival guaranteed. Address,
J. B. MASON,
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13Atf **NORRIS & ANSPACH, Kenton, Ohio.**

absconded, and the mice killed one colony the past winter. I now have 3 good, strong colonies.

I got 75 pounds of comb honey last season. I can sell all I can produce at 15 cents per section, at home. Alfalfa is the source of most of our honey. There is a 60-acre field of it within 20 rods of my small apiary.

One seeding of alfalfa here will last from 5 to 10 years, and yield from 3 to 4 crops per year.

We usually have mild winters, but the past one was a little severe. Almost all of the bee-keepers around here report that their bees wintered very well with little or no loss.

I think it will pay any one who keeps bees, no matter how few, to take the "Old Reliable" right straight along.

ROBT. A. JEFFREY.

Harlan Co., Nebr., April 24.

Loss in Wintering

Bees are mostly wintered on their summer stands in this locality. There has been considerable loss in some yards the past winter. We have our bees in double-walled hives covered with flax-straw. We have lost 11 out of 74 colonies, mostly the weaker ones. There is a good prospect for white clover around here.

M. ZAHNER.

Johnson Co., Kans, April 17.

Bees Wintered Well

Bees have wintered well in this locality. They seem to be healthy and strong. Section honey is dull at 12½ cents per pound. Bee-keeping is growing rapidly in this locality.

Davis Co., Iowa, May 3. W. M. RAY.

Good Prospects for Bees

Fruit-bloom is good. Bees are getting along fine. Clover is in fine shape.

J. W. JOHNSON.

Stephenson Co., Ill., May 4.

Bees Wintered Well

I have 11 colonies this spring, having wintered all that I put into winter quarters last fall; but a year ago I lost 16 out of 21 colonies. The few that were left did well last

Golden Queens and Bees

Ready June 1. Hustlers for honey; very gentle, non-swarming. Price-list now ready—also an 8-page leaflet on queen-rearing, including my experience in curing pickled brood, black brood and bee-paralysis, sent free to all who apply.

HENRY ALLEY,
13Atf WENHAM, MASS.

How to Keep Bees

Many Photographic Illustrations

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Place Your Orders Now.
ITALIAN QUEENS
EITHER GOLDEN OR HONEY QUEENS

Our Goldens will come up to any other Golden Strain. Our Honey Queens are what some term "Red Clover Queens." We always call them Honey Queens.

Before July 1.	1	6	12
Untested	$1.00	$ 5.00	$ 9.00
Warranted Tested	1.25	7.00	13 00
Tested	1.50		
Select Tested	2.00		
Breeders from $5 up.	1	6	12
2-frame Nucleus (no Queen)	2.50	14.00	25.00

When Queens are wanted with Nuclei add price of any Queen wanted. We guarantee safe arrival of all Queens and Nuclei. Our breeders may be returned after 30 days, if satisfaction is not given. Cash must come with all orders. Orders are booked and filled in rotation. We book orders for next season. Safe arrival guaranteed of all stock. We ask a trial order.

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Do not send personal checks unless you add 10 cents for collection. 16Etf

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We are now able to quote lower prices than ever before. Highest quality guaranteed. We handle the G. B. Lewis Co's goods. Italian Bees for sale in dovetailed hives. Send for my 88-page Catalog, and leaflet for beginners. They are free.
44Etf W. J. McCARTY, Emmetsburg, Iowa.

QUEENS

Best 3-band Italian Bees free from disease for —Untested Queens, early in May, 75 cts.; 2-frame Nucleus, with Queen, $2.25. Eight years' experience.

Chesley Presswood,
McDONALD, Bradley Co., TENN.
14A4t-18E2t Please mention the Bee Journal.

summer. Three of them stored over 100 pounds of section-honey, one stored 125 pounds, and the other 2 over 50 pounds each. I live in the timber, with lots of basswood, white clover and other wild flowers, plenty of fruit and pickle blossoms in their season, and but few bees. E. E. KENNICOTT.

Cook Co., Ill., April 20.

Bees Swarming

Bees are swarming now, and have increased a little. Prospects for the season are good.

May the Honey-Producers' League prosper.

Inyo Co., Calif., April 27.

WM. MUTH-RASMUSSEN.

Bee-Locations in Virginia and Maryland

In answer to Mr. John H. Oren, page 284, I would like to say: I should not consider either Virginia or Maryland specially good States for bee-keeping. You say you hope "to do better where the summers are longer and the winters less severe," I should strongly advise your going further south than the above-mentioned States. I append some statistics of winter weather here for the years mentioned:

1889—Jan 31, 4 degrees; Feb. 8, 2; Feb. 9, 11; Feb. 10, 7; Feb. 11. 0; Feb. 12, 1; Feb. 13, 1; Feb. 14, 14; Feb. 16, 12; Mar. 7, 15

1901—Jan., 13 degrees; Feb., 14; March, 7; December, 1.

1902—Jan., 13 degrees; Feb., 8; March, 15; Dec., 13.

1903—Jan., 8 degrees; Feb., 1; March, 23; Nov., 10; Dec., 8.

1904—Jan., 6 degrees; Feb., 5; March, 18; Dec., 9.

1905—Jan., 5 degrees; Feb., 1; March, 24.

The minimum temperature for each month is given for the last 5 years.

Try Texas for your "longer summers and winters less severe," and you will also get many more honey-producing flowers and

SINGLE COMB BROWN LEGHORNS

Noted Winter-Laying Strain. Cockerel Mating, headed by Rochester Prize-Winner; Eggs, $2.00 per 13. Pullet Mating, headed by pullet line; pedigreed; Exmoor males, $2.50 per 15. Flock on range, headed by 2d Wis. State Fair winner, and others of equal quality, $1.00 per 15. Hens in all pens result of 15 years' scientific breeding.

Single Comb Buff Orpingtons. The grand new breed. No better quality in existence. $2.00 per 15 eggs.

Mammoth Bronze Turkeys. Hens up to 23 pounds each. Not inbred. Eggs $2.50 per 19; 25 for $5 00.

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Made of artificial stone. Practically indestructible, and giving entirely satisfactory results. Comb foundation made easily and quickly at less than half the cost of buying from the dealers. Price of Press, $1.50—cash with order. Address,

ADRIAN GETAZ,
44Atf KNOXVILLE, TENN.

J.G. Goodner, of this State, writes me that he "prefers to pay $25 for a Rietsche Press than do without it."—A. G.

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For Queens SEND TO JOHN W. PHARR Berclair, Tex.

He will furnish at same prices as last year: Tested, $1; Untested. 75c; 5 for $3.25; 10 for $6; 15 for $8.25; 25 for $12.50; 100 for $45. He breeds Goldens, Carniolans and 3-Band Italians. Also 1, 2, and 3 frame Nuclei, and full colonies. Prices given on application. Pharr pays the freight, and guarantees satisfaction on all Queens. To do justice and judgment is more acceptable with the Lord than sacrifice.—(Prov. 3: 21.) 6Atf

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BY RETURN MAIL.

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Tin 4-in. Smoke Engine 3½-inch 3-inch 2½-inch 2-inch Wonder
$1.50. $1.10. $1.00. 90c. 65c—per mail.

Sent on receipt of price per mail.

T. F. BINGHAM, Farwell, Mich.

OTISVILLE, PA., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. FRED FODNER.

Please mention Bee Journal when writing.

plants than you will in the States mentioned above.

Our main honey-flow is from white clover, which comes in about the middle of June and lasts till about the middle of August. There is a considerable fall flow in some years from a great variety of wild flowers, but this flow is very uncertain. I am sure there would be no difficulty in purchasing a small farm that would be suitable for an apiary, and do not suppose there would be any difficulty in a Northerner establishing an apiary, or apiaries, on other people's farms. I would be glad to answer other questions if in my power, or go into more minute particulars if desired.

Don't come either to Virginia or Maryland under the delusion that you are coming to "The Sunny South." You must go lower down on the map for that. There has been no winter in the past 15 years that I have not had plenty of use for my heaviest and longest fur-lined overcoat.

While I believe I am right in saying there are very few, if any, large apiaries here, there are numerous small ones, (mainly of the common black bees) scattered about. But I do not consider this State to be anything like half stocked with bees.

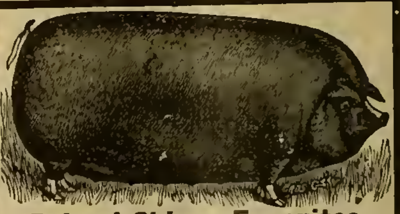
"A BEE-KEEPER IN VIRGINIA."
Augusta Co., Va.

Prospects for a Good Season

We are looking forward to a large honey crop, as white clover will be a fine crop.

We are readers of the American Bee Journal, and derive much valuable information from its pages. J. F. W. WEBER & SONS.
Marion Co., Ill., April 25.

Illinois.—The spring meeting of the bee-keepers of the west part or Freeport District of northern Illinois will be held at the residence of the President, N. A. Kluck, May 22, 3 miles southwest of McConnell, Ill. All bee-keepers are requested to attend. Persons coming by train will be met at McConnell by teams from 8:30 to 9 o'clock a.m. J. W. JOHNSON. Sec.



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This breed of swine is a favorite breed with many raisers, because they stand close confinement better than some others. *Blooded Stock*—that excellent authority on cattle raising and breeding—gives every breed of swine, sheep and cattle a hearing. In this May issue of

Blooded Stock

Poland Chinas will be almost the sole subject considered. How to feed, raise, market, what buildings to provide; how to fight sickness and contagion—all will be thoroughly discussed by several prominent authorities, among them D. P. McCracken and J. A. Meissner. June Blooded Stock will be devoted exclusively to a first hand consideration of the profits and successes of sheep-raising. Subscribe! Get now the value of every number. 25c a year. You can afford it. Don't miss one.
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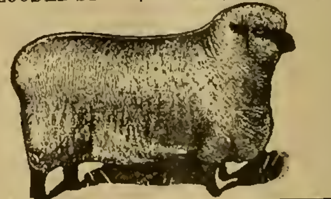

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By Return Mail?

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Office and Salesrooms, 2146-48 Central Ave. Warehouses. Freeman and Central Aves.

Honey and ✣ Beeswax ✣

CHICAGO, May 8.—With April about all the trade in comb honey ceases so far as this market is concerned; occasionally a case sells, but no lots, so that prices now are practically without change, pending the new crop. Extracted is exceedingly slow of sale; white ranges from 5½@7c, and amber 5½@6c, according to flavor, quality and package. Beeswax in active demand at 30c. R. A. BURNETT & CO.

CINCINNATI, May 8.—The demand for honey has increased quite a bit since our last quotation, which is due, probably, to the concessions made in prices to affect sales, as well as the awakening of the spring trade. We quote amber extracted honey in barrels at 4½@6½c, according to quality. White clover and fancy extracted honey at 6@7½c. Comb honey has seen its season. Beeswax 29c cash.
THE FRED W. MUTH CO.

NEW YORK, April 19.—There is no change in the condition of the honey market. Very little comb honey selling and prices ruling about the same as our last quotations. Extracted in fair demand only. Beeswax firm at 30c.
HILDRETH & SEGELKEN.

PHILADELPHIA, May 8.—The season is about over for the sale of comb honey. There are so few sales that the market is not established enough to quote price. Extracted honey has met with some demand, and prices are as follows: White, 6@7c; amber, 5½@6c. Beeswax, 28 cents.

We are producers of honey and do not handle on commission. WM. A. SELSER.

BOSTON, May 9.—There is no change to note in the condition of the honey market from our quotations of April 24.
BLAKE, SCOTT & LEE.

KANSAS CITY, March 31.—The honey situation does not improve. While there is a little better movement the prices seem to be lower. Fancy white brings $2 a case; No. 1, $1.75; amber and lower grades from $1.25 to $1.50. Extracted, 4½@6c. Beeswax, 28c.
C. C. CLEMONS & CO.

CINCINNATI, O., May 8.—The large stock of comb honey yet offered, with hardly any demand causes lower prices. I quote fancy water-white at 12c; other grades lower, in proportion. Extracted is in usual demand for this season of the year. We quote white clover 7@8c; amber in barrels at 5¼@5½c; in cans, 5¾@6 cents. Beeswax, 28c. C. H. W. WEBER.

ALBANY, N.Y., Feb. 8.—Honey market dull this extreme cold weather, especially comb, which candies or granulates and cracks easily. We quote: Fancy white, 13@14c; No. 1, 12@13c; mixed, 10@11c; buckwheat, 10@11c. Extracted, better demand: Buckwheat, 6@6½c; white, 6@6½c. Buckwheat most in demand, as the Jewish people will have no other. Beeswax, 30@32c. H. R. WRIGHT.

SAN FRANCISCO, May 3.—White comb, 1-lb. sections, 11@12 cents; amber, 8@10c. Extracted-white, 5½@6 cents; light amber, 4@5c; amber, 3@3½c; dark amber, 2½@3c. Beeswax-good to choice, light, 29@30c; dark, 27@28c.

The steamer City of Peking, sailing Saturday last, took 85 cases for Belgium. Movement on local account is light. Buyers are holding off, anticipating arrivals of new crop at an early day.

Langstroth on the ⁂ Honey-Bee

Revised by Dadant—Latest Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.20, or club it with the American Bee Journal for one year—both for $2.00; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

GEORGE W. YORK & CO.
334 Dearborn Street, CHICAGO, ILL

Please mention Bee Journal when writing Advertisers.

Bees work best in Lewis' Hives

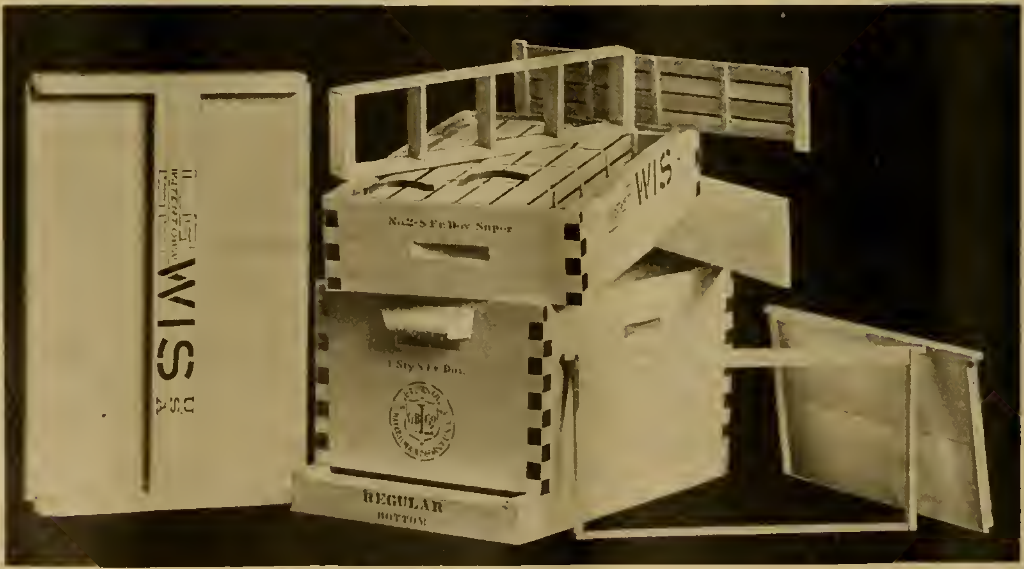
To avoid labor troubles among your bees Buy Lewis' Goods . . . .

Annual Output
Twenty Million Sections
One-hundred Thousand
Hives

LEWIS
WATERTOWN, WIS. U.S.A.

ESTABLISHED
30
YEARS

Below is an illustration of our 1½-story Dovetailed Hive, with the No. 2 super arranged for the 4¼x4¼x1½ plain sections. A full description of this style together with many others will be found in our 88-page Catalog, free on application.



WHERE ARE YOU?

As is customary with all large concerns we have agencies or jobbers in different parts of the United States, where our goods are carried in stock. If you are located near any of those named below it will save you time and freight charges to send your order to them. Where the distance is not so great from Watertown to the agency, these jobbers sell the goods at our regular list prices.

The following are Distributing Points for Lewis' Goods:

ENGLAND—E. H. Taylor, Welwyn Herts.
CUBA—C. B. Stevens & Co., Havana.
CALIFORNIA—Paul Bachert, Acton.
California Lumber & Milling Co., San Francisco.
COLORADO—R. C. Aikin, Loveland.
Arkansas Valley Honey Producers' Association, Rocky Ford.
Colorado Honey Producers' Association, Denver.
Fruit Growers' Association, Grand Junction.
Robert Halley, Montrose.
ILLINOIS—Dadant & Sons, Hamilton.
York Honey & Bee-Supply Co., 141-143 Ontario St., Chicago, Ill.
INDIANA—C. M. Scott & Co., Indianapolis.
IOWA—Adam A. Clarke, Le Mars.
Louis Hanssen's Sons, Davenport.
MICHIGAN—A. G. Woodman, Grand Rapids.
MINNESOTA—Wisconsin Lumber Company, Faribault.
MISSOURI—E. T. Abbott, St. Joseph.
OHIO—Fred W. Muth Company, Cincinnati.
Norris & Anspach, Kenton.
PENNSYLVANIA—Cleaver & Greene, Troy.
TEXAS—Southwestern Bee Co., 438 W. Houston St., San Antonio.
UTAH—Fred Foulger & Sons, Ogden.
WASHINGTON—Chas. H. Lilly Co., Seattle.

G. B. LEWIS CO. Manufacturers of Bee-Supplies **Watertown, Wis.**

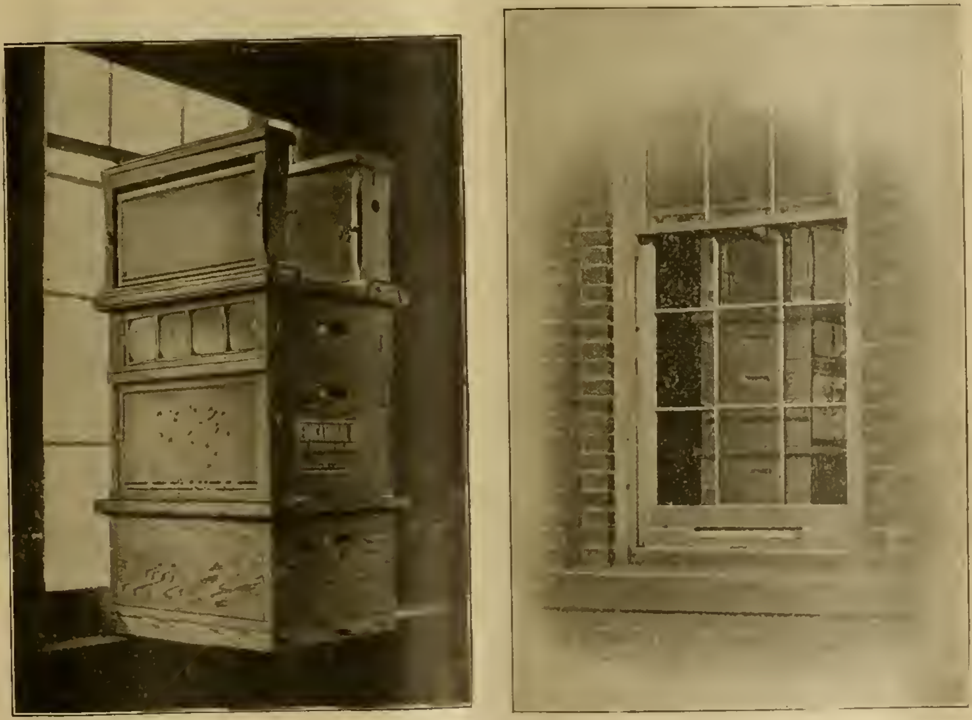
American Bee Journal

OUR TOIL DOTH SWEETEN OTHERS

AGRICULTURAL COLLEGE

WEEKLY—$1.00 A YEAR
Published by GEORGE W. YORK & CO., 334 Dearborn Street

45th Year CHICAGO, ILL., MAY 25, 1905 No. 21

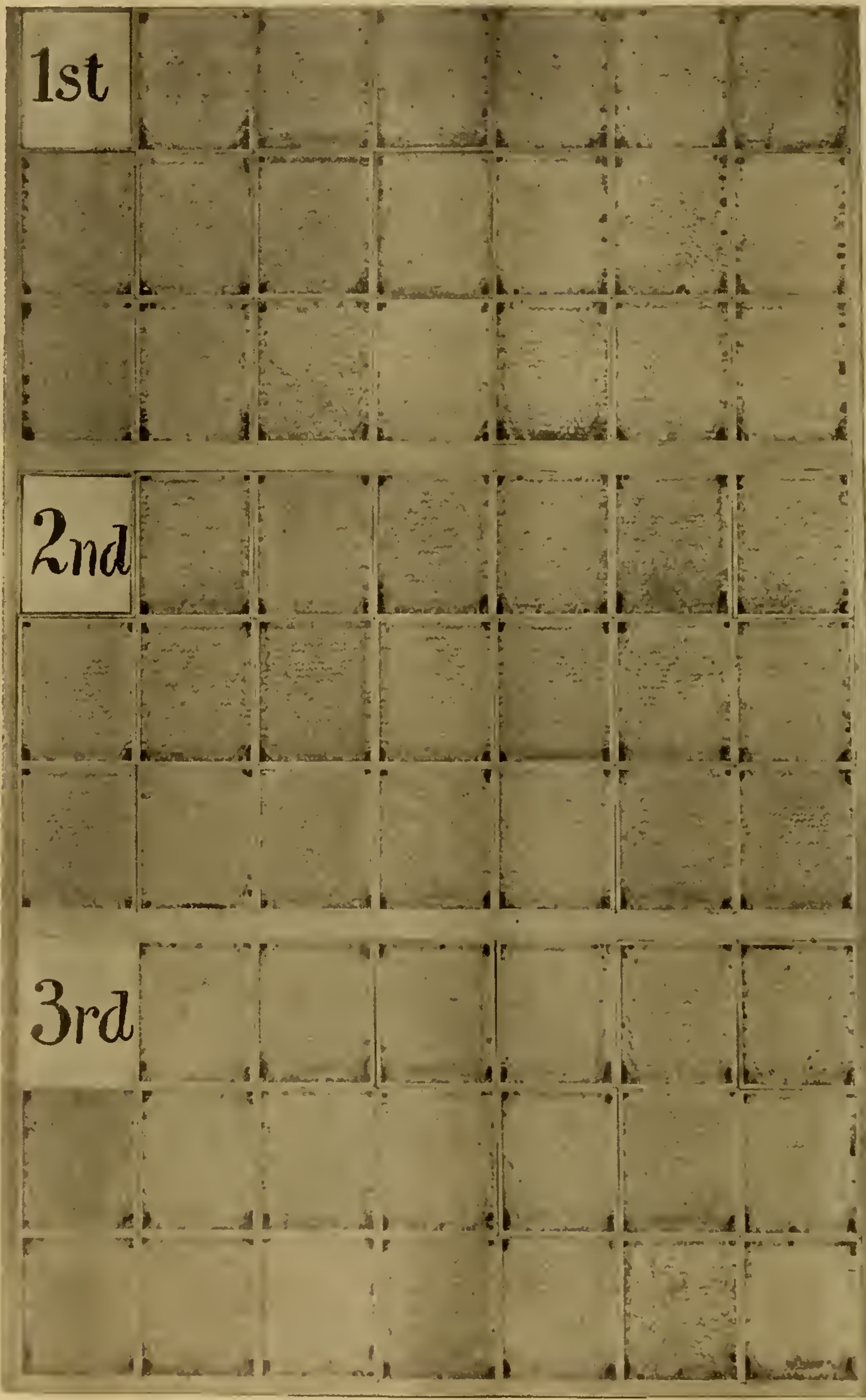


THE BIGELOW EDUCATIONAL HIVE AND MANNER OF SETTING BEFORE A WINDOW, WITH SASH RAISED AND ENTRANCE CUT IN TEMPORARY BAR

JUST LOOK

Carefully at the illustration below. Did you ever see a more perfect lot of sections? Notice the fastenings. Aren't they fine? Take a microscope if you wish and you can find few flaws. Yes, they are the product of the Danzenbaker hive. We have long been **TELLING** what this hive could do: now we **SHOW** you. The Danzenbaker hive excels in the following main points: 1. Yield of honey. 2. Percentage of fancy sections. 3. Wintering. "Facts About Bees" gives the **REASONS WHY.** A new edition just off the press. Send a 2 cent stamp for a copy.

The A. I. Root Co.,
Gentlemen:—Swarming opened here May 1; sections ought to have been put on some hives April 15. How is that for bees on Danzenbaker Frames, and wintered on their summer stands?
QUIRIN-THE-QUEEN-BREEDER, Ohio, May 6, 1905.



The A. I. Root Co.,
Gentlemen:—I am very enthusiastic over the Danzenbaker hive. I wintered my colonies in this hive and they came out as strong as if not stronger than, any colony wintered in chaff hive. I wintered 23 colonies without any loss, all on summer stands.
T. B. HAYES, M. D., Pa., April 29, 1905.

THE A. I. ROOT COMPANY, Medina, Ohio
144 Erie Street, CHICAGO 10 Vine Street, PHILADELPHIA 44 Vesey Street, NEW YORK

ESTABLISHT IN 1861

AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor | CHICAGO, ILL., MAY 25, 1905 | Vol. XLV—No. 21

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY

334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec05" on your label shows that it is paid to the end of December, 1904.

SUBSCRIPTION RECEIPTS.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows that the money has been received and credited.

ADVERTISING RATES will be given upon application.

National Bee-Keepers' Association

Objects of the Association

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00

General Manager and Treasurer—
N. E. FRANCE, Platteville, Wis.

☞ If more convenient, Dues may be sent to the publishers of the American Bee Journal.

The Honey-Producers' League

(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

MEMBERSHIP DUES

1. Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.

2. Any honey-dealer, bee-supply dealer, bee-supply manufacturer, bee-paper publisher, or any other firm or individual, may become a member on the annual payment of a fee of $10, increased by one-fifth of one (1) percent of his or its capital used in the allied interests of bee-keeping.

GEORGE W. YORK, Manager,
334 Dearborn St., CHICAGO, ILL.

Queen-Bee Free as a Premium

To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us ONE NEW subscription with $1.00 for the Bee Journal a year. Now is a good time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.

Editorial Notes and Comments

Some Facts About Honey

Under this head occurs the following clipping from the Liverpool Post and Mercury in the British Bee Journal:

> Honey is the only sweet that may be eaten in any quantities and for a long time without interfering with the action of any of the vital organs. Its food value is twice that of pork, pound for pound, and it has been noticed that persistent honey-eaters are not nearly so liable to diseases of the respiratory organs as those who do not use it at all. It is calculated that the entire honey product of 60 bees during their entire working life will not amount to more than one pound of honey, an amount that a man with a good appetite would eat in a day without thinking much about it.

No bee-keeper is likely to dispute the "fact" that the entire honey product of 60 bees during their entire working life will not amount to *more* than one pound of honey. But in reading the statement given, the ordinary reader will be likely to understand as a "fact" that the life product of 60 bees will amount to as much as a pound of honey. Let us try a little figuring on that. Take a colony that has produced 100 pounds of honey. If each pound required the work of only 60 bees, there would be needed only the work of 6000 bees for the 100 pounds.

Again, figure from the standpoint of the number of bees in a colony. It would be hardly more than a moderate estimate to say that during a season 60,000 bees of a colony put in their lives at storing honey during the course of a season. If every 60 of them brought in a pound of honey, that would lead us to expect from each colony in a fair season not less than 1000 pounds of honey.

It is a nice thing to have the general press give facts about honey; but if the Post and Mercury would be a little more careful *how* it gives the facts contained in the last sentence, the public would be likely to put more faith in its other facts.

◆

Side Springs for Brood-Chambers

Recognizing the need of *constant* pressure in a brood-chamber containing frames spaced automatically, the use of springs has been suggested. Some hives are used with dummies; some have none. With no dummy, and with the bees strenuously endeavoring to crowd glue between the frames, there is danger that there will be not only fixed distances, but fixed frames as well. The case is better with dummies only in so far as there is more room to fill up. Given time enough, and glue enough, and the dummy is likely to become fixed. As a help against this it is recommended, when closing up a hive, always to crowd the frames together hard, so as to squeeze out the glue between the frames. If this be faithfully done, and if the points of contact between the frames be small, there will be a minimum of trouble. But no hurried crowding together will do. The frames must be crowded together with force, and held in that way some little time, to allow the glue to be squeezed out. That time would be saved with springs.

The springs would also continue at work after the closing of the hive. The constancy of the pressure would also be a stand-off against the hundreds of little tongues constantly trying to crowd in glue between the frames; and this constant effort of little tongues, especially in a gluey region with such frames as the Hoffman, is no little matter.

With some frames and in some localities, springs in brood-chambers might not be worth while; in other cases they might be well worth while.

◆

"Be a Booster"—for the League

In Gleanings in Bee Culture for May 15 we find the following paragraph written by J. A. Green, one of the department editors:

> BE A BOOSTER.
>
> Join The Honey-Producers' League, and lend your money and your influence to the first organized effort to improve the condition of the honey market by the use of modern business methods. Your help is needed. Lay aside your selfishness, and do not be afraid to help yourself because in so doing you may help others.

Just read that over again, please. The League is, as Mr. Green says, "the first organized effort to improve the conditions of the honey market by the use of modern business methods." Then why not become a member, and help to get the League to work on its special and important mission?

It may be you have some objections to something or somebody connected with the League. Well, it is quite possible that everything and everybody in connection with it are not perfect, but we can assure our readers that it is a sincere, honest effort to try to get all who are interested in honey—either its production or sale—to co-operate, and endeavor to create such a demand for honey as shall promptly take every pound produced, and at a fair and just price. Surely, its objects are praiseworthy, its need is pressing, and its membership list should *soon* be crowded.

It is an opportunity offered to bee-keepers to help themselves. The question is, Will they do it?

We believe they will.

More Bees—More Honey

A Wisconsin subscriber, in a private letter, referring to advertising honey, says this:

> "I consider honey a luxury which a great many people can not afford. The cry with you writers is, Keep more bees—produce more honey! How can we expect the price to keep up?"

If the writer of the foregoing will refer to the back numbers of the American Bee Journal we do not think he will find that *we* have advised keeping more bees, although, wherever a bee-keeper *thinks* he can make it *pay*, he will certainly "keep more bees," and thus "produce more honey," whether advised so to do or not.

Our advice to bee-keepers has been, for years, to organize and advertise, so as to get a better price—a more just price—for the honey already produced. After that is accomplished, we believe it will be time enough then to arrange to "keep more bees and produce more honey." We may be wrong about this, but that is the way it looks to us.

True, honey is now considered a luxury. But why should it be so considered? Surely, the price is low enough now so that any family could afford to buy it if they only knew about it. With meat regularly at 18 to 20 cents a pound, and butter about 30 cents, it seems to us that honey can be afforded pretty often at 15 to 18 cents, especially when its high value as a food is considered.

We verily believe that if honey were brought to the attention of the consuming public as are many of the breakfast foods, the demand for honey would be greatly increased. We know of no better way to do this than to *advertise*. Do you?

Baby Nuclei with Common Hives

It is perhaps too early yet to say whether, all things considered, it is a very great step in advance to be able to have virgin queens fecundated with a very small number of bees; and so far it is the specialist in queen-rearing rather than the every-day bee-keeper who has made any trial of the plan. One reason for this is the fact that as yet few honey-producers take any special steps toward queen-rearing; leaving the matter entirely to the whim of the bees. Another reason is that it is some trouble to make ready the little hives needed. If ordinary hives were used, it is likely that more bee-keepers would have tried the baby nuclei. Of course it would be expensive for those who rear queens on a large scale to use full-sized hives; but the honey-producer is likely to have always on hand extra hives, and these he can use without extra expense.

Dr. Miller had a number of queens fecundated in common hives, using for each nucleus only enough bees to cover well a pound section of honey, and the process seems very simple. He says:

> "I took an empty hive, closed the entrance entirely, put in the hive a section filled, or partly filled, with honey, putting the section in a shallow wide frame, or even on the floor in one corner of the hive; then I took from any hive convenient a frame of brood with adhering bees—of course being careful not to take the queen with the bees—shook into the nucleus hive the bees from the brood-comb, and immediately dropped into the hive, on the floor, a virgin queen just emerged or only a few hours old, and as quickly as possible closed the hive. Three days later I opened the entrance large enough for a single bee, and in most cases I found the queen laying when 10 days old. It is possible older virgins would do. In some cases I used queen-cells well matured."

It will be noted that queenless bees were not necessary, and that the queen was dropped right among the bees with no precaution whatever as to introduction. Mr. Sladen, in the British Bee Journal, says it is a very valuable point "that a virgin queen, even several days old, is readily accepted 4 to 6 hours after the nucleus has been formed, provided that there is no brood in its combs." Dr. Miller did not wait even "4 to 6 hours," but it is not certain that he would have succeeded with virgins "several days old."

American the Best Linden for Honey

The bee-keeper who knows the great value of the linden, or basswood, and knows that more than one variety of linden exists, is likely to be interested to know whether some other than the common variety may not be better. Prof. Frank Benton has had exceptional opportunity for comparative observation. Lindens have been extensively planted in Washington, in the parks and for miles on both sides of many of the streets and avenues, and he says in Government Bulletin No. 59, "Several species of lindens are included in these plantings, but none yields more than our common American linden, or basswood (Tilia americana)."

Miscellaneous News Items

Foul Brood in Texas is to be wiped out. Mr. H. H. Hyde, of Bexar County, informs us that the State Legislature has appriated $1600 to begin eradicating foul brood. We hope that the good work may be kept up until that dread bee-disease may be wholly cleaned up in all the land.

Mr. J. T. Calvert, of The A. I. Root Co., and also Mr. Frank Spellman, both of Medina, Ohio, were callers at this office last week when in Chicago on a business trip. Mr. Calvert reports a rushing business in bee-keepers' supplies, and looks for a large crop of honey throughout the country this year. If his prediction proves true, bee-keepers will need to do a lot of advertising in order to dispose of the honey produced at a fair price.

Lecture to Cincinnati Bee-Keepers.—The Executive Committee of the Hamilton County Bee-Keepers' Association announce that they have secured the services of Mr. W. Z. Hutchinson, of Michigan, to deliver n lecture to bee-keepers and friends of the honey industry in Cincinnati and vicinity, in the Convention Room, Grand Hotel, 4th Street, Monday evening, May 29, at 7:30 p.m. The subject chosen is, "The Comforts and Conveniences of the Apiary" in their relation to modern bee-keeping and honey-production. A great treat is in store for bee-keepers and others, as seldom such an opportunity is presented as this to hear one of the recognized authorities of the United States on this growing and important industry.

Mr. Walter W. Somerfield, of Cuba, has promised to be present also and talk on bee-keeping as practiced in the "Pearl of the Antilles." Production of his apiary in 1904 amounted to 140,000 pounds of honey.

Ladies, heads of families, grocers, school teachers and pupils of the public schools have been invited to be present and enjoy the interesting and instructive lectures. Admission will be free.

Jonathan Stewart, an old resident of Stephenson Co., Ill., and also well known for years in bee-keeping circles in that region, died at his home, Saturday, April 29, after nearly four years of suffering from paralysis. He was 78 years old, having lived in Stephenson County for about a half century. He was a regular attendant at the sessions of the local bee-keepers' association, of which he was also an officer. He was a member of the Presbyterian church, and a faithful and upright man.

A Big Hive and Handy Honey.—The Graphic-Herald, of Webster City, Iowa, gives the following account of a colony of bees in a house:

> A HOME APIARY.
>
> Mr. Thos. McDermott has an unique apiary at his home in the south part of the city. For two or three years past a swarm of bees has been housed in between the ceiling and floor, finding an entrance through crevices in the brick wall. Several swarms have come and gone in there each year until there is an awful mess of bees. Mr. McDermott tried to have them removed at one time, but without success, and the floor was taken up and several wash-tubs and boilers full of honey removed. Afterwards the floors were removed each year and the surplus honey taken out. Now he has arranged a set of frames that fit in between the joists, and when new honey is wanted it is a simple matter to remove the carpet, take up the floor and take out any quantity of honey needed n ineat frames, setting back the empties, to be refilled. A perfect "apiary" in every shape, and the bees are quiet and gentle, and seem to like their home. Several hundred pounds of fine honey was the yield last year.

Contributed Special Articles

The Bigelow Educational Bee-Hive

BY EDWARD F. BIGELOW

INSECT STUDY—BEES IN PARTICULAR.—It is in the world of insects, vast and varied, its members innumerable, beautiful, and almost miraculous in transformation, that the naturalist revels. The entomologist proclaims the attractions of his favorite pursuit as does no other naturalist, and no other disputes his claim. The most exuberant language fails to do full justice to the subject. Kirby and Spence, years ago, wrote as follows:

> "Were a naturalist to announce to the world the discovery of an animal which, for the first five years of its life, existed in the form of a serpent; which, then, penetrating into the earth and weaving a shroud of purest silk of the finest texture, contracted itself within this covering into a body without external mouth or limbs, and resembling more than anything else an Egyptian mummy; and which, lastly, after remaining in this state without food and without motion for three years longer, should, at the end of that period, burst its silken garment, struggle through its earthly covering, and start into a day a winged bird—what, think you, would be the sensation excited by this strange piece of intelligence? After the first doubts of its truth were dispelled, what astonishment would succeed?
>
> "But you ask, "To what do all these improbable suppositions tend? Simply to arouse your attention to the *metamorphoses* or *transformations* of the insect world, almost as strange and surprising, to which I am now about to direct your view—miracles, which, though scarcely surpassed in singularity by all that poets have feigned, and, though actually wrought every day beneath our eyes, are unheeded alike by the ignorant and the learned because of their commonness and the minuteness of the transforming objects."

All this, bear in mind, is in praise of what is already known. Of the charm of discovering these facts, the entomologist James Rennie wrote:

> It can never be too strongly impressed upon a mind anxious for the acquisition of knowledge, that the commonest things by which we are surrounded are deserving of minute and careful attention.
>
> If it be granted that making discoveries is one of the most satisfactory of human pleasures, then we may affirm without hesitation that the study of insects is one of the most delightful branches of natural history, for it affords peculiar facilities for its pursuit.
>
> "If you speak of a stone," says St. Basil, one of the Fathers of the church, "if you speak of a fly, a gnat, or a bee, your conversation will be a sort of demonstration of the power of Him whose hand formed them, for the wisdom of the workman is commonly perceived in that which is of little size. He who stretched out the heavens and dug up the bottom of the sea is also He who has pierced a passage through the sting of a bee for the ejection of its poison."

This very large order of animal life which, Prof. L. O. Howard states, "comprises nearly 30,000 described species; but the enormous number of undescribed species......would probably swell this number to more than 300,000."

Of this vast number of insects, the one pre-eminent in human interest is probably the honey-bee. Says Morely, "Both ends of the honey-bee have always been of singular interest to us, and this for exactly opposite reasons. It is a double-ender—one end the friend—the other the enemy of man."

This supreme interest in the bee, Prof. John Comstock expresses less humorously, but no less truthfully when he says:

"The honey-bee, through its useful products, has been known and cared for by man for centuries. Philosophers have written about it, poets have sung its praises, and naturalists have studied it during past ages, until there is probably no other insect with which man has such an intimate acquaintance."

In face of this overwhelming interest, the study of the honey-bee, so far as apparatus is concerned, has fared the worst of all at the hands of the scientists or the educational naturalist. They have sold the master study, and relinquished chief title in it for a bag of gold. In the hands of commercialism bees have fared well. Father Langstroth lifted out the honey; Bingham and Root smoked out the bees; Coggshall and Dixie brushed them off; Porter kept them out of their home; Cowan whirled out the liquid honey, and Danzenbaker and others made it convenient to capture comb and all. Alley caught the queens and drones; Doolittle, Miller, and Boardman said, "Let us feed them when they are weak, so they can work better for us;" Hershiser and Mason bottled the honey, and Sturwold exhibited it to the public, all saying, in effect, "Bring up your money, and eat." Then they all shouted in chorus, "There's money in it! keep bees, and get rich!"

One manufacturer tells of "millions and millions of dollars' worth of honey taken from bees annually;" boasts of a plant with a working capital of $300,000, and pictures the honey product in the United States every year as "making a solid train-load" 50 miles long. Where, all this time, is the educational naturalist who *loves the bee* as well as its product? Resting quietly, and perfectly willing, apparently, to let commercialism dominate the entire subject.

He will spend his money on elaborate bamboo rods, nickel-plated heads of ingenious devices, with fine mesh nets for the flying insects, approved drag-nets, and devices for water-insects, elaborate breeding-cages, collecting boxes; plaster of Paris, and glass and other mounts; costly storing-cases, and other elaborate paraphernalia. He will devise ingenious methods for observation of ants, as have Comstock, Fielde, and others. But what will he do for the bee, the charm, the supreme interest of entomology? Nothing. No catalog of entomological supplies with which I am familiar, though picturing a great variety of breeding-cages for other insects, has one word to say in favor of studying bees, or even a device to show for facilitating the investigation of their habits. That has been left to commercialism, and commercialism cares for nothing but the money of the arrangement.

In a life devoted more or less to the study of bees as a *Nature Study* topic of supreme merit, I have more and more felt the need of *an educational bee-hive.*

This need has presented itself to me in the twofold relation of workmanship and convenience. To remedy this defect I have devoted all my spare time for several months past. Let us examine these needs.

1. WORKMANSHIP.—A leading book on *Nature Study* in the school-room and home, pictures of a clap-trap dry-goods box affair that would not for a moment be tolerated as an apparatus for the study of physics in any laboratory in the land. Even those who cry the loudest for home-made apparatus in physics would not accept such a crude thing as that. A poor farm-house would demand better workmanship in a box to put behind the stove for holding fire-wood—it surely would if the photographic illustration does the subject justice. A prominent magazine devoted to life in the country has two or three times pictured arrangements for holding a single frame of bees in a window. If we are to judge from the illustration, it must have been the poorest piece of furniture in the house. The tone of the article, and the appearance of the illustration, convey the impression that the writer felt a pride in the fact that the whole thing was cheap and home-made. But why cheap and home-made? Is the subject unworthy our attention? or is it unworthy our best treatment?

Why does that periodical not publish articles on "How to Make a Dog-Kennel Out of a Dry-Goods Box;" "How to Make a Cage for Your Canary Out of Old Umbrella Ribs;" "How to Tear Up Old Rags into Ribbons for the Neck of Your Pet Cat"? or—but why argue furthur? The articles admit the interest in bees as a home ornament. Then why insult the bees with anything short of *the best?*

In a leading university and in a prominent museum I have seen a crude "observation hive" visited by greater crowds of people than were the show-cases of specimens, and have heard them excite more exclamations of interest and wonder. Yet the glass in one of the doors cost more than the entire hive; indeed, the hives in both places were such ramshackle affairs that an up-to-date bee-keeper would hardly consider them worth a place in his back-yard apiary. The probabilities are that such an apiarist would chop them up for kindling-wood. Yet why this "economy" of the university or the museum? Are not live bees of more interest than pinned beetles or skeletons of muskrats? If they are, give them a "case" at least as good.

2. IN UTILITY AND CONVENIENCE.—The so-called "observation hive" has consisted of 8 or 10 frames with glass on both sides, with or without covering doors, exposing usually about two-thirds of one side of the outermost comb. The real work of the bees is on the inner combs; but, waiving that disadvantage, a hive that exposes to observation from one-twelfth to one-fifteenth of its comb surface (the glasses at the end are useless) is not an observation hive; it is an *aggravation* hive.

Another form of so-called "observation hive" has been a simple affair with glass sides for holding one frame of comb temporarily removed from a hive, with the bees upon it. For temporary exhibition of one comb this has its place; but as an observation hive it is a misnomer and a failure. From their unnatural surroundings, and from the fact that they have no facilities for clustering between protecting combs for warmth, and especially since the bees soon die in it, my opinion is that the contrivance would better be named a tribulation or *devastation* hive. Another apparatus, originating in England, and intended to secure the desired result, has been made of two series of frames with four or five in each vertical row! Could anything be more absurd as a matter of ingenuity, or further removed from the natural condition in the natural hive? I can imagine nothing.

These facts, united with the belief that the honey-bees are unexcelled in interest from the nature-study standpoint, have impelled me for months to study the subject, and to plan what now seems to be an ideal educational bee-hive, and I have intrusted its manufacture to The A. I. Root Company, who have had extensive experience in building hives for the honey-gatherer; and who are in full sympathy with the nature-study conditions, and who, furthermore, have unexcelled facilities for fine workmanship. The hive is to be made in finely finished pine, ash, or oak, and glazed in first-quality glass.

The essential feature is an *observation chamber* backed by a force of bees in regular body hive with glass sides.

As the physicist has a battery or motor from which he takes out electricity for such experiments or observations as he may desire to make with special apparatus, so here the bee naturalist is provided with the ability to make observations and experiments.

The chamber is supplied with a padded division-board, which serves to divide it into two hives, and which is also useful as a background for photographing results obtained in either apartment. The bees may be readily isolated as a separate colony in either section for artificial feeding, for rustic comb-building, or for other purposes. The chamber is deeper than the body of the hive, so that the entire extent of the regular frame or other comb-support may be seen or photographed.

Under each half-chamber is an ingenious arrangement of slot and bee-escape. When the thin metal cover is drawn entirely out, bees go in or out freely; when half in, the bees go out only, and the chamber is soon cleared. Push the metal plate entirely in, and the bees go neither in nor out, but may be instantly removed to another hive for experimental purposes. Not a bee can then take flight to freedom, and there is not the slightest possibility of being stung. By using one or both of these sliding covers, the hive is readily made into two or three hives. Holes in the top are supplied with caps and with jar feeders.

Observation Super.—A regular Danzenbaker super with 32 4x5 sections is the third story of the hive. This is supplied with observation sides, which give clear exposure from the top to the bottom of the outer sections.

Removable Hives.—Above this are two traveling hives for temporary exhibition. Bees are let into this by slot and escape device (as is done with each half of the observation chamber), so that bees may be carried from place to place or be used for class exhibition, or for nuclei experiments, and without the slightest danger of loss or injury either to the insects or to the apiarist. Both have the regular mouth opening for use as a single isolated hive. Many experiments that can not be made in the divided observation-chamber can be performed in these removable hives.

Magnifying Feeder.—This is on the end opposite the mouth of the main hive, and is so arranged that the observer, looking through a powerful lens, faces the window at which the whole hive is located. The top and back of this feeder are of glass. Diluted honey or simple syrup is put in small quantities in a trough one-eighth of an inch wide. Bees stand on an elevated glass shelf, and each one takes the sweets from the narrow space between the two glasses, as it takes the nectar from the flower. Collectively they have the appearance of "feeding at the trough like little pigs."

The powerful lens slides back and forth so as to give a view of any portion of this trough, wherever "the best feeding" is in progress. The lens is set one-eighth out of center from top to bottom, so that by turning the supporting-block, a range of adjustment of one-fourth of an inch up or down is given. A delicate focusing adjustment is provided by a screw with a range of three-fourths of an inch. This lens shows the heads and proboscides of the feeding bees in a wonderfully interesting manner.

The bottom of the feeder is provided with slot and slide as an escape device, previously described, and the whole is easily taken from the hive by the slides and carried to a window for closer observation, or it may be passed around to members of a class or to visitors.

Artificial Feeding.—Between this magnifying-feeder and the end of the hive which has the mouth opening there are two jar feeders with perforated caps. These are so arranged that one is over each half of the observation chamber. The hive is also provided with a Doolittle division-board feeder that may be placed in the main hive, in either observation chamber or in the one or two removable hives. From these last the cover may be taken off and the feeder put in without the escape of bees, provided the sliding cover is previously pushed in half way, so that the portable hive is cleared through the Porter escape.

Flying Cage and Observation Box-Hive.—This attachment, like the magnifying-feeder, is not supplied regularly with the hive, but is regarded as an extra. It will be found very serviceable in a variety of experiments. Three sides are of glass. The other has non-rustible wire-netting. This netting is placed next to the main hive in place of the tube entrance. A long slot through the lower part of the frame matches the mouth opening of the main hive. The purpose of this flying cage is to provide a place in which the bees may fly when the hive is set up in a room away from a window for observation, instruction, or exhibition. This will be found very serviceable for use in fairs, and for temporary exhibition in schools, also for advertising purposes, and when placed with the entire hive in the show-window of a store.

This cage is hive-size, and takes on the top the regular cover, the feeding-board, with the main hive or supers. At the upper and lower portions are places for feeding. The inside of the hive is regularly fitted with supports for regular frames, or for rustic sticks. In this manner it may be used in imitation of the original bee-trees, the whole being covered with paper, cloth, or other material for making the interior dark. When this covering is removed, the entire inside of the bee-tree with rustic cross-sticks may be readily seen.

When the cage is not thus used in connection with the main hive, it is turned around so as to face in the same direction as the other hive, and both are then side by side at the window, with two tube entrances as two separate hives. A large base-board is provided for the hives when used in combination. This cage is so designed that it may readily serve many other natural-history purposes. It is unexcelled in convenience as a transforming-cage for lepidoptera or for aquatic insects. For the last-mentioned purpose bowls or dishes of water to hold the aquatic specimens are placed in the lower section.

When used as a larval feeding-cage, pots of earth with growing plants, or broken branches placed in bottles of water which are set in the earth in the pots, may be placed in the lower section.

The main hive is fitted with the Danzenbaker entrance-stops. The bottom-board is clamped to the main hive by the Van Deusen hive-clamp.

The alighting-boards of the tube entrances take Alley's queen and drone trap, bee-guards, etc. It is recommended that the Root queen-rearing outfit be purhased in connection with the hive.

Another very useful accessory is an observation lens five inches in diameter.

With the complete hive, the magnifying-feeder, the flying-cage, and observation box hive, the Root queen-rearing outfit, and the observation lens, facilities are afforded for every phase of apiarian observation, experiment, instruction, pleasure, or exhibition. At last we have an observation hive worthy the subject. The optical parts are by one of the most famous and extensive manufacturers of lenses in the world. The woodwork and bee-appliances are by the largest manufacturing establishment of apiarian apparatus.

I have not tried to produce a cheap or simple hive, but rather one which the bees and their friends have long merited. I am confident that all concerned will be pleased.

Contrary to the advice of many friends who have known of my prolonged study and work on this hive, I have refused to take out a patent. On the contrary, I have arranged with the manufacturers to have the hive and all its accessories placed on the market at the cost of production. Considering the detail and workmanship, I regard the price as barely covering cost of labor and materials. I am confident that the hive-manufacturers must look for profit to the sale of their regular goods to the new converts which I am sure this hive will bring to the fascinating field of apiculture.

Profit and the spirit of commercialism in no wise enter into the production of this hive. I have regarded the labor spent upon it as a labor of love. To my fellow-students and lovers of Nature I cordially bestow and heartily commend "The Bigelow Educational Hive." May the study of these wonderful insects afford you as much pleasure and instruction as they have afforded me.

New Method of Artificial Swarming, Etc.

BY C. DAVENPORT

(Concluded from page 359.)

THE event I described in my previous article in regard to a new method of making artificial swarms, took place late in the season after most of the swarming was over, so I had a chance to test this plan on only a few colonies that season, but most of these I allowed to have sealed queen-cells before I swarmed them. None of them appeared to swarm out, and all went to work with all the vigor of natural swarms.

Last year, as I said, was a poor honey season, but more than enough was secured to keep up brood-rearing, and swarming was excessive. Nearly all medium to strong colonies made preparations to swarm. And now, to be brief, I swarmed by this new plan last season over 200 colonies, many of which had sealed queen-cells.

And, now, what will be hard to believe is the fact that not one of these swarmed out, and all worked fully as well as natural swarms.

Another fact that I expect few to credit is, that I can swarm a colony by this plan, and secure more honey, than if they were allowed to swarm naturally, or than would be secured if they had stayed together with no desire to swarm, and this without regard to whether the colony is weak, medium or strong. That is, I can, here in the North, with our short flow. There is, though, in spite of all I have said, one disadvantage about this method, and that is, that so far I have not been able to devise any way by which this method can be used to unite two swarms. Here, with our short flow, more honey—especially comb—can be secured if two swarms are united, but there are possibilities about this method that I have not yet fully developed or worked out, and I wish to experiment and handle the matter alone another year before giving it to the bee-keeping world.

REMOVING BEES FROM CELLARS.

I would now like to say something about removing bees from cellars in the spring that may be of benefit to some who have not been engaged in our pursuit long, and possibly it may to some who have. The credit for this belongs to a Mr. West, who lives somewhere in the East. It was about removing bees from cellars in the evening, or at night, and since reading what he said in regard to the matter, I have put a good many of my bees out in the evening. I tried the plan in a small way at first, for it seemed to me that after bees had been confined so long they would, if carried out at night, fly out the next day without regard to what the weather was, but I found that such was not the case. The only trouble I have ever found in this respect—and I remember that Mr. West mentioned this—is, that if it should snow before they have a chance to fly, and then turn warm suddenly, some bees may be lost in the soft snow. I have had this occur, but I do not think the loss of bees was very serious.

Sometimes bees become so restless and uneasy by spring in cellars where conditions are not right that as soon as light is admitted the air becomes thick with flying bees that seem crazy to sting somebody or something as soon as they get out.

A year ago last spring a man came some distance and said he would pay me almost any price I might ask if I would get his bees out of the cellar either dead or alive, he did not care much which. He had about 25 colonies in large box-hives in the cellar under the house where all the fruit and vegetables were kept, and had been disturbed more or less all winter until they had finally gotten so that none of the family dared open or go into the cellar.

I told him he could remove them at night without trouble, but he said they were as bad or worse at night. This man knew practically nothing about bees. He had bought them late the previous fall, of a neighbor who had moved away. I mention the matter partly because, although these bees were wintered in a cellar under very unfavorable conditions, I have seen but very few bees in as good condition in the spring as they were. Most of those large hives were fairly crowded with bees. The cellar was very warm, and the great roaring they made was what made him think they would fly at night.

But even in a case as bad as this there need be no trouble in removing them at night, for after the window and outside door had been opened for some time they were removed and wheeled some distance on a wheelbarrow without any bees leaving the hives.

But often the greatest advantage about removing bees at night is in regard to robbing. After colonies have had their first flight in the spring I never have any trouble or pay any attention to robbing. I keep the hive-entrances of weak colonies contracted according to their strength, and if they can not defend themselves robbers are welcome to take them. But I have never yet lost one colony by robber-bees, that was worth saving, and I throw out broken combs or leave honey out to be cleaned up any time it suits me to do so.

I have, though, met with some serious losses by having colonies robbed when they were first put out. Bees seem to make no effort to defend their stores when put out in the daytime until they have had a good flight. And if only part of the bees in a cellar are put out, and a number of days elapse before the rest are removed, those first put out may remove nearly all the stores from a large number of those just put out. But when this is the case there is no fighting and loss of bees on this account, for, as I said, they make no effort to defend their stores, and if no honey is in the fields they of course soon starve to death unless close watch is kept and those robbed are fed.

Now, for some reason, when they are carried out at night they defend their stores. They fly more slowly, and seem to keep guard and be on the lookout for robbers. Robbing, though, under these conditions, can be prevented if they are put out in the daytime. All that is necessary is to give the colonies first put out a good smoking just before putting out the rest. But I prefer to put them out on pleasant evenings, because it saves opening and shutting the cellar-door for every hive, and no precaution has to be taken to close the hives, for the bees will scarcely attempt to fly out, no matter how roughly they are handled, at least when the evenings are cool as they always are here in early spring.

Southern Minnesota.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Trip of a French Bee in a Bouquet

[The following sketch, written by a sister of sunny France for the French bee-journal, L'Abeille de L'Aisne, and translated by our good friend, Mr. C. P. Dadant, will no doubt be enjoyed by the readers of this department. am told that there is a Mr. Dennler who is editor of a bee-journal, and it is not unlikely that Mrs. Lucie Dennler is his wife.—E.M.W.]

A few days ago I was unpacking a box of exotic flowers sent to me from Nice by a lady friend, when, in the calyx of a blossom, I found a small honey-bee numb and almost inanimate. Poor little one, victim of your zeal, you had been gathered with the blossoms on which you foraged! Seized with pity, I attempted to revive it, and while warming it with my breath, I laid it by the window in the rays of a March sunshine.

I then indulged in the charming occupation of admiring the rich assortment of blossoms that the surprise box contained. The table was soon covered with them. Anemones with bright and varied colors, white and yellow jonquils, Parma violets, orange blossoms and white lilacs, gigantic mignonettes and branches of mimosa, the fine and sensitive leaves of which had folded themselves during the trip to take on a new life at the contact of water and air. This blossoming world evoked the picture of the sunny and perfumed South of France. It is this rich flora which supplies the distillers of Grasse with the penetrating perfumes they make. I read, only a few days ago, in the Belgian Bulletin of Arboriculture a very interesting report, showing that the perfume of mignonette costs

$3700 per pound, and that it takes 16 tons of those flowers to produce a pound of perfume. The essence of violet costs a still greater price, and it requires 33,000 pounds of these blossoms to produce a pound of essence. These wonderful figures caused me to deplore the fact that so many acres of blossoms were sacrificed to satisfy the demand for a matter of vanity and luxury when the same fields would be of great use to our little bees and the common good.

While I was thus pondering, my little immigrant had become warmed by the pale sun of Alsace, and I soon heard it buzzing gaily and striking against the panes, already hungry for air and probably labor. Poor little one, how you will wonder and wander in vain through our cold country seeking for flowers and plunder! How foolish you were to allow yourself to be thus packed among those flowers. If I were to turn you free you would die of cold, or would be killed by your Alsatian sisters. What shall I do?

I then thought, as an anchor of salvation, of the queen-cage, so ingenious and practical. I introduced my little ward in one of these with a few drops of honey. I was anxious to see whether the little French bee would be accepted. But how could I know? I was determined to watch the hive that was to contain it. I had recourse to the coloring recommended by our friend and bee-master, Mr. Kraemer. I entrusted to the more experimented hands of my husband the task of decorating the corselet of our little friend with a bright red spot.

The cage has been opened and the prisoner released. Yesterday, in a fine sunshine, I had the pleasure of seeing the little southern bee flying out of the hive among its companions of Mutzig, and shortly coming back with a load of pollen evidently gathered on the alder-bushes near by.

And now, dear little winged worker, have courage. Be contented with the Alsatian flora. If it is not as rich and as varied as that of the romantic Riviera, it is yours all the same, and you can harvest from it some delicious honey.

I do not know whether this page will please my readers, but I found that trip of a bee in a bouquet so pretty and so unique that it has seemed to me worthy of being mentioned.

Mrs. Lucie Dennler.

No "Colored Line" in Bee-Keeping

Mistah Editoh:—Ise now gwine to write to you 'bout de Sistahs' department. My good wife Dinah wants to know if dar is any objeksun to a cullahed lady jinin' de circul ob de Merican Bee Journal sistahs? If dare is no cullah line, den how much does Sistah Emma charge for a sistah jinin? Will you please refur de foregoin' quesshuns to Sistah Emma to be anshured in de Sistahs' department ob de Bee Journal, and oblege?

Well, as dis am de fust time dat I rote to de Merican Bee Journal, I specks dat I better tell de bruddern who I is. My maiden name is "Jeems," but de boys all call me Jim. I specks I is more dan 40 yeahs old. I had been keepin' bees fo' ni on to 25 yeahs. Obcose we keep only de cullahed bees, as dey seem mo' in harmony wit de things around us, but Dinah says dey had mose too warm a tatchment too de childun, as dey am so familiah wit deir biznes ends.

My daughtah "Arrovis" says to tell you dat aldo she is not quite 16 she is very sweet, specially when she is helpin' wit de huney.

If our huney crop turns out as well as we spect this faul, me and Dinah specks to jine de Nashional 'Sociation in a body. Dar am some people here that come from China, and they call huney "sting-bug juice."

It hab bin said dat dar am nufin imposible; but dar am, becase it would be impossible to make my son Eb's mouf widah witout fust settin' his eahs back.

We hab a nectah plant heah called allumweed. De huney from hit am so stringent dat a spoonfull giben to a comon chile will pucker up hits mouf so hit can't baul fo' seben houre; but hit takes two spoonsfull fo' Eb.

Oh, yes, I like to fogot to tole you dat I is a cripple; dey say dat I was bawn dat way—crippled in de hed, or, as Dr. Sea Sea Miller would say, "Crippled in de upper story of de anatomy of de cullahed jentleman."

From your confectionate brudder—
Whitman Co., Wash. Jeems Smith.

There is no colored line that Sister Dinah can not easily climb over to get into the charmed circle of the Sisters' department, and she will be welcome at any time to join "in a body."

Honey for Sleeplessness

Honey has been reported as very helpful in cases of sleeplessness, and it is well known that milk helps to put to sleep grown-ups as well as babies, but why has not the combination of the two been thought of as a remedy for insomnia?

Recently a Sunday-school institute was held in Marengo, and the absence of one prominent in both Sunday-school and public-school work was much regretted. From a letter just received, the following is taken:

"I had planned to attend, when, for some unknown reason, I became a victim of insomnia, being unable to sleep for three weeks ....Honey and sweet milk before retiring brought back my natural sleep, so I am now recuperating rapidly."

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

PATENTS AND SO-CALLED MANUFACTURED COMB HONEY.

Provoking, but very decidedly interesting, is the language of that patent mentioned on page 276. Seems to show that, notwithstanding rules, a man may get Uncle Sam to give him a patent on an impossible invention. Examiners are human and finite—and may be about as lacking in bee-sense as the private citizen we are oft amazed at. As a natural result they don't always know what is possible, and what is impossible; and they give the man who wants a patent the benefit of the doubt. Somebody invent and patent a machine for taking a certain leading misrepresenter of comb honey and making him into a somewhat different sort of man. The finished product of this machine would try to compensate old wrongs instead of adding to them. Said product would realize what great wrongs he had done in the past to a section of the people he is paid to serve. Therefore, said product would not put out words sounding like the words of a lawyer paid to do more of the same mischief—as much of it as possible without out-and-out untruth.

And the New York Tribune, mainly right, and all along leaning on apparent evidence, still loses sight of the main thing—as human beings usually do when they argue. The main thing is that a company of honest people in an honest calling are confronted everywhere with the charge that their product is completely fraudulent. And *that* charge is not a fact, and there is no danger of its ever becoming a fact, yet The Tribune will not say so in a way to count as it should.

Still, when we get flogged for what we are not guilty of, it's a good time to remember that we are guilty of some things that we are seldom flogged for. Even The Tribune did not tell them—because it did not know of them. I have seen exposed for sale at a grocery in Toledo alleged comb honey, sections that had no cappings on at all, and the lower portion of the comb was not yet built out to full thickness. This is a rare piece of bee-man's wrong-doing; but there are some things not rare that we ought to be flogged for. As we can't make our adversaries quit their meanness, suppose we go to work and quit ours. Suppose The Tribune had said, "If comb honey is never adulterated *how came this taste of soap in it?*"

SHORTER HOURS FOR MICHIGAN BEES!

Why, Comrade Bingham, if you didn't push too far we might be induced to grant that the air of Michigan may have something languid in it, inducing laziness in man and bee—but only two hours, out of the long June day, for bees to gather—we feel that you must have overdone your job somehow. Your trade union hardly wants you to leap from the 8-hour day to the 2-hour day all at one step. Page 278.

SEALING HONEY WITH HEAT OF HIVE.

That's a queer question on page 279 about sealing up honey with the heat of the hive still in it. Not likely that such a practice would (*per se*) do any harm. The trouble is that the heat of the hive is not enough to do any good particularly. Seal up honey when it is as hot as your hands can well bear. Considerable time must be given the minute floating particles and air bubbles to rise, and the attempt to utilize natural heat would prevent this.

DECOY HIVES WITH WORK IN THEM.

About decoy hives, Dr. Miller, what do you think of this? Don't have the combs and floor *too clean*—hive rubbish on the floor and combs calling for considerable work. The idea is that when a swarm enters a hive voluntarily it is almost always because they have become attached to that hive by doing lots of preliminary work in it. How can they go and work day after day in a hive where there is no work to do? This is apropos to your answer to "Michigan," on page 281. I am not *sure* a perfectly clean decoy would be any the less attractive for its cleanliness; but I suspect that scouts on first visit would go away much quicker if they found nothing to do, and therefore be less likely to return.

CALIFORNIA'S VARIABLE HONEY PROSPECTS.

Yum, yum! Sure prospects now of lots of California honey on the market—unless something new under the sun transpires—or again unless an almost unprecedented succession of cold winds continue all the time through the time of harvest. Page 282.

BIGGEST HONEY-YIELD—SMELTER GAS.

That was a splendid honey-yield of Mr. Lovesy's, related on page 284—one strong colony increased to six, and made to yield close to a thousand pounds of surplus. Pity those 384 sections were not weighed. We can hardly assume that they weighed 383 pounds without a little more evidence of it. I am a little inclined to think that this is the most satisfactory and best authenticated approach to the 1000-pound yield that this continent has had published so far.

Probably where bees suffer in winter from the gas of distant smelters, it helps them a little to be in a 4-story hive—supply of pure air inside. Where winters are severe and air perfectly pure, I think all needless extra space inside is more or less of a damage. When the hives are so few why not winter them on a high, 4-posted platform—providing the roof of a building can not be fixed to answer? Bees should live wherever human beings can, *if they are kept as far from the ground.*

Introducing Queens

I have many times introduced queens—both virgin and mated—by using flour as a pacifier. When removing a queen from nucleus for a customer, I introduce another at once, sprinkling the bees with a little flour, and also the queen, then dropping her in among the bees, or letting her run in between the frames, and in nearly every case she has been accepted. This is a great saving of time to the bee-keeper.—W. Woodley, in the British Bee Journal.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to Dr. C. C. Miller, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Diseased Bees

We have 20 colonies of bees, 4 of which are diseased, and we do not want the disease to spread.

The colonies are pretty strong, have frames full of brood, and have plenty of honey. The larvæ die in various stages, some while quite young and others just before being sealed and after being sealed. Some die while they are white, some turn brown and black. Those that are black are large, but both turn black, sealed or unsealed. Some of the larvæ come half-way out of the cell and stick there. There is a sour smell on combs and larvæ, but no ropiness in the larvæ.

1. Do you think it is pickled brood, or foul brood?

2. Can we feed the honey back to the bees?

3. We have shaken the bees into new hives on new frames and foundation, and let them fly. Have we done right?

4. What causes the pickled brood, if it is pickled brood?

5. Do you think the cold, frosty nights did it?

6. We hear there is some foul brood in our township, but none closer than 4 or 5 miles, that we know of. If this is foul brood to whom should we send a sample?

Illinois.

Answers.—1. It may be pickled brood.

2. No, the honey will very likely carry the disease with it. If it is nice honey it will be all right for the table.

3. It would probably have been better if you had waited till bees were busy storing.

4. A microbe, but just exactly what microbe does not seem entirely settled.

5. Not if it's anything like pickled brood.

6. General Manager N. E. France, Platteville, Wis. Put in tin or wood, so it will not be mashed in the mail.

Swarming Affected by Hive-Color

At the State Bee-Keepers' meeting yesterday Allen Latham said bees would not swarm from a hive painted a dark color and set in the shade. Does the color of a hive have any effect on swarming when in the shade?

Connecticut.

Answer.—1. I don't understand why color should make any difference in the shade. Possibly he meant that shade would lessen the likelihood of swarming, even if the hive was dark.

Queens Missing and No Queen-Cells

This spring I sent to one of the queen-breeders for 2 queens, which I introduced into 2 good, strong colonies. One week later I opened the hives and found both queens all right and both were laying. I put a feeder in each hive, and began feeding a little every night. Two weeks from the time I introduced the queens I looked for them again, and found them without any trouble, as the bees were blacks and the queens Italians. A few days later I looked for the new queens to clip them, but could find neither of them. Do you think the bees killed them, and if so what was the cause?

I waited a week and then looked again, but there was no queen in either hive, and the eggs had all hatched. I could find no queen-cells started yet, so I waited a week and looked again, shaking the bees off the combs and looking very carefully for queen-cells, but there was no sign of one started. I have since given each colony a frame of eggs and brood, and still they do not start queen-cells. The brood is all sealed except that in the frames I have given them the past week. What can I do to get them to start cells?

Minnesota.

Answer.—The case is a very unusual one, and I don't know what to think of it. Sometimes a queen is accidentally killed by the bee-keeper when a hive is opened, and sometimes the opening of a hive makes the bees kill a queen, but it would seem strange to have it happen with 2 colonies, and then to have neither colony start cells. If they persist in refusing to start cells, you might try swapping frames of brood and bees with other colonies.

Strong Colonies for Winter

1. Does it pay to work for strong colonies of young bees to go into winter quarters?

2. Can it be done by feeding in the fall to cause brood-rearing?

3. When would you begin feeding for that purpose, and how long would you feed?

Minnesota.

Answers.—1. It pays to have such colonies, and it sometimes pays to work for them.

2. Yes, if there is no yield of honey in late summer and fall.

3. Generally I wouldn't begin at all, for generally nature takes care of the matter; but if there is an absolute absence of nectar I would perhaps begin toward the last of August and continue 2 or 3 weeks.

Bees in a Nail-Keg—Moths—Transferring—Swarming Rendering Beeswax, Etc.

I have a small colony of bees which I kept outdoors all winter in a nail-keg. When I hived them last fall they seemed to be a large colony, but they have been dying until now there is only about a quart of bees in all. On March 16 I changed them to an 8-frame hive which I had made. While I was transferring them the weather got cooler, the temperature going to 40 degrees above zero. I put a good roof over them and a carpet over this. They had nearly enough brood-comb to fill one frame, and only about 4 square inches of honey. They have never seemed to be satisfied since I changed them, and did not appear to be gathering any honey or pollen, although the apple-trees are in bloom, and several days ago, while still in the keg, they were gathering in a great deal of pollen. Yesterday—8 days after I transferred them—the whole colony left the hive. I followed them 150 yards, and they clustered on a limb. I put them in the hive again, and they seemed to be better satisfied. I don't think they have a queen. She probably got killed while I was transferring them. I have never seen her, although when they swarmed I looked carefully for her.

1. Is the loss I mention natural?

2 Should there be a constant loss of bees in winter through dying and falling to the bottom of the hive?

3. What does a honey or comb moth look like?

4. How early is it safe to transfer, taking climate, etc., into consideration?

5. What is the best time to transfer?

6. Can a colony of bees be transferred to a hive, or can a swarm be put in a hive, without any honey or comb, or even foundation starters, or is it best to put comb in a hive when transferring or hiving a swarm?

7. How is beeswax made? Should it be a bright yellow color, or rather dark? In what shape should the cakes be made for sale?

8. How much brood-comb should there be in an ordinary 8-frame hive about the first of May?

9. Would it be best to get a frame of brood and put it in the hive, or put starters in the frames?

10. Would having no queen cause them to swarm? If so, will they swarm again?

11. Will bees build comb in a brood-frame at all without starters? Indiana.

Answers.—1 and 2. Yes, bees are constantly dying off from old age, and all the worse in a colony which was queenless last summer or early fall, as there are none but old bees.

3. I don't know. Perhaps you mean a bee-moth, or wax-moth, which is a common-looking moth of a dull, grayish color.

4. Not before fruit-bloom.

5. About 21 days after the issuing of the prime swarm, for that allows the prime swarm practically to transfer itself. If you don't want to wait for that, transfer in fruit-bloom.

6. A swarm will generally stay all right in a hive entirely empty, but in transferring the combs go with the bees.

7. Melting the combs and separating the wax from the other parts makes beeswax. Unless it is burned or injured in some way it should not be very dark color. It doesn't matter about the shape of the cakes.

8. The 8 frames should be entirely full of comb in the fall, and of course there will be just as much comb the following May.

9. If you mean, when hiving a swarm, it is better to have the frames entirely filled with foundation, and many think it advisable to give a frame containing brood and honey to a swarm.

10. Yes, a colony in the case you mention would be more likely to swarm out if queenless, and still more likely if also short of stores. In that case they are likely to swarm out again.

11. Yes, but they may not build it just where you want it.

If you have not already secured a book of instruction about bees, you could not more profitably invest a dollar or so than in that way.

Sunken Brood Cappings, Etc.

1. When the cappings of the brood-cells are sunk, is it always an indication of disease, or are the cappings of healthy brood sometimes sunk?

2. Of what use to the bee are the 3 black spots (thus ∴) seen on the back of the head of the larvæ about the time the eyes begin to get dark?

3. Is there any reason for bees so often holding their hind legs straight down instead of using them to hold on with when they cluster?

4. I had 4 queens come out with a swarm, and, as far as I know, it was a prime swarm. How would you account for that?

Tennessee.

Answers.—1. I don't know that the cappings of healthy brood are ever sunk, but dead brood might have sunken cappings without any disease being present; and, of course, dead brood could hardly be called healthy brood.

2. I don't know unless it be the three single eyes.

3. They are likely to have a good reason for everything they do, but I don't know what the reason is in this case. If you mean when they cluster in festoons, it would seem that the hind legs ought to hang down free so that the next bee below could hang onto them.

4. The old queen may have been lost in some way (possibly accidentally killed, possibly she issued with a swarm, was unable to fly, and the swarm returned), and when the young queens matured a number were allowed to go out with the swarm.

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Reports and Experiences

Swarms Entering Empty Hives

I notice on page 281 a question about getting swarms to enter empty hives. I would like to know how it is done. When the bees swarm I place an empty hive wherever I have cut a bee-tree. The places are about a mile apart. James L. A. Miller.

Gasconade Co., Mo.

Moving Bees

I have seen a great deal about having trouble in moving bees a short distance. I moved my bees about 300 feet without any trouble on Feb. 20, and they had two flights before I moved them. I don't think any one would have trouble if it were done right.

W. H. Hobert.

Muscatine Co., Iowa, April 20.

Giving Afterswarms Combs of Brood

In reply to G. M. Doolittle's advice to a beginner to give to a second or afterswarm a comb of brood, that it is all right from the mother colony where no eggs are to be seen, or he may find that virgin queen right in front of that second swarm, killed by its own bees. It might work with genteel Italians, but not with cross bees. I give brood to first swarms to insure their remaining. I never allow eggs where a queen is to mate, not even in baby nuclei, and they generally finish the best queens of all.

I have been a bee-keeper for 40 years, and for 16 years have secured my living from them. One don't need 100 colonies to support a family, when he knows how to handle bees. John H. Gunther.

Wood Co., Wis., April 19.

Honey Sold in Light-Weight Sections

I have sold goods (groceries) for over 20 years, and it is my observation that 9 out of 10 people will say that they don't believe there is a pound of honey in a section, and it was only by weighing it for them that it was possible to make a sale, and not always then. But I very seldom failed to make a sale when the section weighed a full pound.

Henry Co., Mo., May 5. F. P. Daum.

Selling Light-Weight Honey

As to selling honey by light weight, when I first commenced with section honey I used 1¼ sections, and found that the bees did not build in all sections alike. One-half bulged

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so badly that I could not case them. About this time the fence separator made its appearance. On examination I found that a 1⅝ section and the fence just filled the 1⅞ slats. I find that a 1⅝ section filled when the fence is in will average 15 ounces right through. I put 15 sections in a 12-pound case and sell it at $1.50. That is as cheap as dirt.

I would not do anything with the bees if I could labor, but I am crippled with rheumatism so badly that I can't get about to do other work. I think that Mr. Morgan is right. When I fill up what few empty hives I may have on hand, I let the rest go if I can not double up. D. C. WILSON.

Linn Co., Iowa, March 24.

Fastening Foundation

No doubt Mr. Doolittle can do all he says be can in making bee-fixtures in the winter, but he did not inform one how he works his wax. He no doubt has a shop which he can make comfortably warm and that is sufficient to take the brittleness out of the foundation. Then very likely he uses knife and wire-imbedder, as hot as hot water can make them, to work it.

We tried every way we could learn of to stick foundation, without much satisfaction, until we stumbled on using hot beeswax, and the way to do it.

In our shop the ground is the floor, and we dig a pit in the center and build a fire in it sufficient to warm it, and the smoke goes out of the open places. We have no snow, and a small amount of freezing weather. We then have an oil-stove to heat water, tools and wax. We use a discarded frying-pan to heat water in and set in this a miner's small coffee-cup filled with wax to be melted. Next we must have a stop to put on the frames, to stop the foundation in the center of the frames. We take a stick larger than the top-bar of a frame

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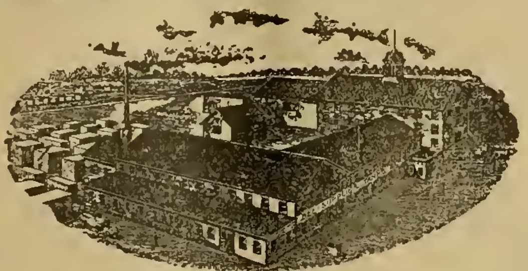

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and cut out a piece the size of the top-bar, only a shade thicker, so we can wedge the frame. Then cut a piece a half-inch thick, and nearly the length inside the frame, and nail it on the first piece so the edge will come nearly to the center of the top-bar. Then the foundation will be in the center of the frame, then wedge so the top-bar will fit up to the last piece. The foundation can be set on the bar and pressed down tight with the fingers, so the melted wax will not run under it. Then take a frame and foundation in the hand, and hold it at an angle of 45 degrees, more or less. Take a spoon and dip up the hot wax. We soon learn the proper amount, and put it at the upper corner pouring it out so it will run down the corner of the frame and wax. It soon cools. Then turn the frame and serve the other side in the same way, being careful to keep the foundation resting on the wire when turning. Patience and perseverance soon enable one to make a good job.

We prepare a quantity of foundation, one side of which *must* be made straight with a straight-edge, and a hot knife out of a frying-pan of hot water. Heat the wire-imbedder in the same place.

We never were so well prepared for swarming-time as we are now, having done all our work of making hives and frames, and wiring and putting in foundation last winter. The bees are late in commencing to swarm here. In the orange orchards they were swarming several days ago.

If my description of putting in foundation will help out some beginner in bee-keeping I shall be satisfied. A. B. CARPENTER.

Tulare Co., Calif., April 28.

Putting Out Cellar-Wintered Bees

The spring problem with cellar-wintered bees has been solved by me in the following way:

Seven years ago I put some bees out on March 23, to save them. They did so well that I have ever since put all the bees out the first fine day in March, with very good results, compared with the years previous to that time, when I waited for settled warm weather.

I made a bad-weather case by sawing a large shoe-case through the center, after nailing laths on each side of the proposed cut. I then put 4 to 6 feed-sacks over each hive, and put the case over all. Close the entrance all but a small space, and all is well.

The cases and sacks are also used in cold weather to get the bees to stay in supers one night. At the time of our harvest in the fall the nights are so cold that every bee will leave the supers, and I can lift them off in the morning without escapes, leaving me with thin and uncapped honey.

JOHN J. MCRAY.

Ontario, Canada, April 19.

White Clover, But No Nectar

Bees are doing poorly. They wintered well and built up well early in the spring, but they have been living on stores they had from last fall, or what has been furnished them in the shape of combs of honey saved over for the purpose of feeding from last year. There is lots of white clover in bloom but it seems there is no nectar in it. May be when it stops raining every few days the bees will do better.

ROBT. A. HOLEKAMP.

St. Louis Co., Mo., May 16.

Balled Queens—Values the American Bee Journal

I have been trying to get some new subscribers to the American Bee Journal, but every one I spoke to side-tracked me in some way. One man laughed at me and asked me if I believed there was such a thing as foul brood.

On March 12 I visited a man who was taking out honey. I asked him if he was not robbing the bees, but he said that the bees would never eat all that honey, and besides they could live all right from now on, any way. He had about 40 colonies in box-hives, and was cutting down into the brood. It looked to me as though he needed the Bee

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Journal, so I gave him one, and told him how it taught us of the decided advantages of the new hives over the box-hives. He said he had been getting along with his bees for about 20 years without the help of a bee-paper, and guessed he didn’t need any.

For the last 12 years I have been a blacksmith, and in the spring of 1903 I bought 4 colonies of black bees from one of those haphazard bee-keepers. They were in some kind of movable-frame hives, but the comb was built in all kinds of shape. I wanted to Italianize them, but waited for them to swarm. I sent for a couple of queens—first subscribing for the American Bee Journal—cut out the crooked combs and divided 2 colonies. I then got a bee-book and went to work. But I want to say that I give one copy of the American Bee Journal the whole credit for saving the life of one of my queens. Every time I looked into the newly divided colonies after putting in the caged queens, I hoped to see the queens crawling around among the bees. At last the bees freed the queens and balled one of them. Now I was at a standstill, and started a letter to one of my friends to find out what to do. As luck would have it the Bee Journal came that night, and I began to look through it when I noticed a heading about balling queens. The good man that wrote it told how to drop the ball in a pan of water to get the queen out. I could hardly wait until the next morning, when I “baptized” that ball of bees in great style. I got the queen, and put her on the top-bar, and that was the end of my trouble in introducing. I worked after the instructions of the Bee Journal and “A B C of Bee Culture,” and built my 4 colonies up to 13 last year, have brought them through the winter in good condition, and they are working nicely.

J. D. PASLAY.

Limestone Co., Tex., April 3.

Bees Dying from Cold and Starvation

I do not say there are no bee-diseases, but I do think that here in the Northern States bees die more from freezing and starving than

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Choice home-bred and imported stock. All queens reared in full colonies.

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Consisting of Hives, Sections, Shipping-Cases—everything used by the practical, up-to-date bee-keeper.

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Revised by Dadant—Latest Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.20, or club it with the American Bee Journal for one year—both for $2.00; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

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Open to both sexes from the beginning. Founded in 1846. Highest grade scholarship. First-class reputation. 25 instructors. Alumni and students occupying highest positions in Church and State. Expenses lower than other colleges of equal grade. Any young person with tact and energy can have an education. We invite correspondence. Send for catalog.

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BY RETURN MAIL.

Try Taylor's 3 banded leather-colored and 5-banded Golden Queens—the best honey-gatherers in America. Untested, 75c each, or $8 per dozen; tested, $1, or $10 per dozen; select tested, $1.50 each; breeders, the best, $3 each. I have been breeding queens for 17 years, and I know what a good queen is. No small queens sent out. I guarantee safe delivery. Send your orders to J. W. TAYLOR, Ozan, Ark.

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Never Go Out
And last from 5 to 21 years
4 Largest Sizes Soot Burning

Pat'd 1878, '82, '93 & 1903

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Original
Direct Draft
CLEAN
Bee Smokers

Tin 4-in. Smoke Engine 3½-inch 3-inch 2½-inch 2-inch Wonder
$1.50. $1.10. $1.00. 90c. 65c—per mail.
Sent on receipt of price per mail.
T. F. BINGHAM, Farwell, Mich.

Otisville, Pa., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. Fred Fodner.

THE ELGIN HIVE

That's the hive which can be knocked down and put up by any one in a few minutes. No nails or dovetails needed. Iron attachment holds the same together perfectly air tight, and keeps it from warping. Send for Circular. Address,
G. H. KIENZLE,
E. end Kimball St. Bridge, Elgin, Ill.

19A4t Please mention the Bee Journal.

from any disease. This has been my experience for 20 years.

One year in Pierce Co., Wis., I lost my bees in the cellar; they were smothered to death. In the winter of 1903-04 I lost over 100 colonies from no disease, but from freezing and starving, as I bought them after they were prepared for winter, and did not know they had been robbed of stores. The past winter I kept only 35 colonies. When I took them out of the cellar they all seemed to be in fine condition. After they had been out about a week I noticed a lot of bees of one of the colonies were dead. I opened the hive and found they had nothing to eat. I gave them honey, which cured the disease in 5 minutes. I believe it is with bees as with other animals—they must have good care and plenty of stores to winter safely through the severe winters we have in Minnesota.

I know of a farmer that drove his cattle out to a rotten straw-stack every day in the coldest weather. Late in the winter a lot of them died, then he wrote to the State veterinarian to find out what kind of disease they had, when they actually starved to death! I think that is the trouble with some bee-keepers. They write to find out what is the matter with their bees when the only trouble is that they are freezing or starving to death.

Nels Christensen.

Crow Wing Co., Minn., April 24.

Severe Winter—Honey to Displace Other Sweets

The past winter was very severe here in Southern Missouri. We had snow for two months, and the season seems to be two weeks later than usual. Bees gathered the first pollen on March 23, and last year it was March 7. We did not have much of a honey-flow last year—the spring was too wet and rainy—but as I belong to the Bee Journal school and family, I secured from 12 colonies $25 worth of section honey and 8 gallons of extracted for family use. I don't know how the coming summer will be, but I think it may not be any worse.

This is a timber country. I believe every farmer could keep at least a few colonies of bees for home use. That would teach them to get used to honey instead of sorghum, which most people use nowadays as a sweet. To create a greater demand for honey I believe there should be a start made on the farm.

In a country across the Ocean there are people who use no other sweet than honey. It is a small country in Bulgaria. Sugar is not found in the stores anywhere. Farmers or peasants bring honey to town and trade it for what they need. Every farmer, teacher, and preacher keeps from 15 colonies up, according to the size of his farm. The people are very much interested in bees, and raise sweet clover, which produces the most honey there.

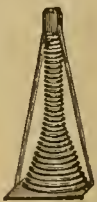
I believe the farmers and bee-keepers in this country would do well if they would try more of the clovers like alsike, alfalfa, etc., which will increase the honey-flow.

I make my own hives, as the freight charges are too high to have anything shipped. I buy only sections.

I wish the American Bee Journal many new subscribers. John Zieka.

Texas Co., Mo., April 25.

Queen-Clipping Device Free!



The Monette Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. It is used by many bee-keepers. Full printed directions sent with each one. We mail it for 25 cents; or will send it FREE as a premium for sending us One New subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,
GEORGE W. YORK & CO.,
CHICAGO, ILL.

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Guaranteed Superiority!

Lowest Prices

We have been making Bee-Hives, Sections, etc., for over 20 years.

New .. Illustrated .. Catalog free; also sample copy of

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(Monthly, 50 cts. a Year.)

The best magazine for beginners. (It has been published by us regularly for 15 years.)

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JAMESTOWN, N. Y.

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When consigning, buying or selling, consult
R. A. BURNETT & CO.,
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SEND FOR OUR CATALOG OF BEE-SUPPLIES
We handle the best makes of Dovetailed Hives, one-piece Sections, Comb Foundation, and all other articles needed in the apiary, at lowest living prices. Bees and Queens for sale in season. A. W. SWAN & CO., Centralia, Kan.
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We Sell Root's Goods in Michigan
Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.
M. H. HUNT & SON.
Bell Branch, Wayne Co., Mich

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Bee SUPPLIES

The best of everything for the poultry and bee-keeper.

Freight Rates from TOLEDO are the Lowest

BIG DISCOUNTS FOR EARLY ORDERS.

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TOLEDO, - OHIO.

Headquarters for Bee-Supplies

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COMPLETE STOCK FOR 1905 NOW ON HAND.
FREIGHT RATES FROM CINCINNATI ARE THE LOWEST,
ESPECIALLY FOR THE SOUTH,
AS ALL FREIGHT
NOW GOES THROUGH CINCINNATI.

Prompt Service is what I practice.
Satisfaction guaranteed.
You will save money buying from me. Catalog mailed Free.
Send for same.
Discounts allowed on early orders. Take advantage by ordering now.

Book orders for GOLDEN ITALIANS, RED CLOVERS and CARNIOLAN QUEENS.

☞ For prices refer to my Catalog.

At Root's Factory Prices

C. H. W. WEBER CINCINNATI ...OHIO...
Office and Salesrooms: 2146-48 Central Ave. Warehouses Freeman and Central Aves.

Honey and Beeswax

Chicago, May 8.—With April about all the trade in comb honey ceases so far as this market is concerned; occasionally a case sells, but no lots, so that prices now are practically without change, pending the new crop. Extracted is exceedingly slow of sale; white ranges from 5½@7c, and amber 5½@6c, according to flavor, quality and package. Beeswax in active demand at 30c. R. A. Burnett & Co.

Cincinnati, May 8.—The demand for honey has increased quite a bit since our last quotation, which is due, probably, to the concessions made in prices to affect sales, as well as the awakening of the spring trade. We quote amber extracted honey in barrels at 4½@6½c, according to quality. White clover and fancy extracted honey at 6@7½c. Comb honey has seen its season. Beeswax 29c cash.
The Fred W. Muth Co.

New York, April 19.—There is no change in the condition of the honey market. Very little comb honey selling and prices ruling about the same as our last quotations. Extracted in fair demand only. Beeswax firm at 30c.
Hildreth & Segelken.

Philadelphia, May 8.—The season is about over for the sale of comb honey. There are so few sales that the market is not established enough to quote price. Extracted honey has met with some demand, and prices are as follows: White, 6@7c; amber, 5½@6c. Beeswax, 28 cents.

We are producers of honey and do not handle on commission. Wm. A. Selser.

Boston, May 9.—There is no change to note in the condition of the honey market from our quotations of April 24.
Blake, Scott & Lee.

Kansas City, May 12.—The honey situation is a little stronger, and there is but little honey left in the hand of the dealers. Best honey bringing from $2.25 to $2.50 a case; amber at from 25@50c a case lower. Extracted, 4½@6c. Beeswax, 28c. C. C. Clemons & Co.

Cincinnati, O., May 18.—The large stock of comb honey yet offered with hardly any demand causes lower prices. I quote fancy water-white at 12c; other grades lower, in proportion. Extracted is in usual demand for this season of the year. We quote white clover 7@8c; amber in barrels at 5¼@5½c; in cans, 5¾@6 cents. Beeswax, 28c. C. H. W. Weber.

Albany, N.Y., Feb. 8.—Honey market dull this extreme cold weather, especially comb, which candies or granulates and cracks easily. We quote: Fancy white, 13@14c; No. 1, 12@13c; mixed, 10@11c; buckwheat, 10@11c. Extracted, better demand: Buckwheat, 6@6½c; white, 6@6½c. Buckwheat most in demand, as the Jewish people will have no other. Beeswax, 30@32c. H. R. Wright.

San Francisco, May 3.—White comb, 1-lb. sections, 11@12 cents; amber, 8@10c. Extracted-white, 5½@6 cents; light amber, 4@5c; amber, 3@3½c; dark amber, 2½@3c. Beeswax-good to choice, light, 29@30c; dark, 27@28c.

The steamer City of Peking, sailing Saturday last, took 85 cases for Belgium. Movement on local account is light. Buyers are holding off, anticipating arrivals of new crop at an early day.

DOOLITTLE'S

Partner telling his best girl about the fine

Italian Queens

in their apiary. Don't order a queen till you get one of their circulars.

CHOICE BREEDERS
Now being sent out.
DOOLITTLE & CLARK,
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Please mention Bee Journal when writing.

40-Page Catalog Free!
Full information regarding all kinds of BEE-KEEPERS' SUPPLIES. Best goods. Latest improvements. Danzenbaker Hives and Fixtures. Prompt shipments. JOHN NEBEL & SON SUPPLY Co., High Hill, Mo, 3Dtf

ITALIAN QUEENS AND NUCLEI.—Untested Queens, $1; Tested, $2; Select, $3; Breeding Queens, $5; 2-frame Nucleus with Queen, $3.25. Address all orders to
B. T. GREGORY.
21A1t Beeville, Bee County, Texas.

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WHERE YOU BUY YOUR
BEEWARE
LEWIS U.S.A.
WATERTOWN, WIS
MAKES THE FINEST

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REQUISITES
To the Bee-Keepers' Happiness are found with every
Lewis Shipment

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1. Good Goods
2. Prompt Service
3. Fair Prices
4. Accurate Count

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Above is an illustration of our regular 2-story Dovetailed Hive, including two full-sized bodies with deep frames for extracting. This is only one of the many styles described in Catalog.

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And Can Ship the Same Day

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Send to the Nearest One

Full List Given in Our Catalog
FREE ON APPLICATION

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American Bee Journal

OUR TOIL DOTH SWEETEN OTHERS

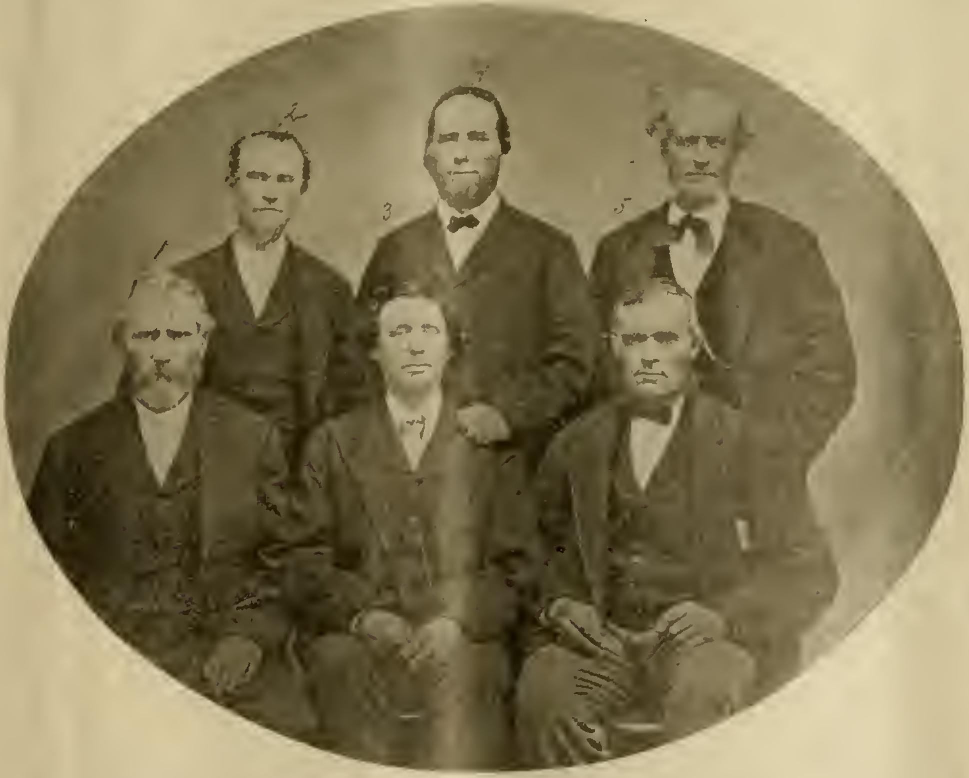
WEEKLY—$1.00 A YEAR
Published by GEORGE W. YORK & CO., 334 Dearborn Street

45th Year CHICAGO, ILL., JUNE 1, 1905 No. 22

WEEKLY

Temporary Officers of the First National Bee-Keepers' Convention

Held at Indianapolis, December 21 and 22, 1870.
(See page 388.)



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2. Sec. M. M. Baldridge
3. Pres. A. F. Moon
4. Asst. Sec. W. F. Clarke
5. Vice-Pres. Dr. E. Gallup
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REAR QUEENS

It is not as difficult as many imagine. An instruction book and one of our Outfits, and you can supply your apiary and your neighbors at a profit. A good Queen IS the key to a good honey crop. See to it that ALL your colonies are queen-right.

ROOT QUEEN-REARING OUTFIT

In this outfit are embraced the best points of the best systems in use. It will give satisfaction to the amateur as well as the expert. The cell-cups are made of wood, wax-coated. No melted wax is used in their manipulation, as they are attached to the cell-stick by means of a small nail-point.

The nursery cage combines the features of nursery and introducing cages. By their use a queen can be released on the candy plan or caged in the hive as desired.

In connection with the outfit goes a booklet on queen-rearing—one which ought to put the veriest amateur on the high road to success. Outfit comprises 3 cell-bars with 50 waxed wooden cells, one frame cages, (20); one cell-forming stick; one set grafting-tools, and a book on queen-rearing, $4.50.

Wood cell-cup, with point for attaching to bar, 50c per 100; $4.00 per 1000.

Same, waxed, ready for use, 75c per 100; $6.00 per 1000;

Titoff wire nursery-cages, 15c each; $1.35 for 10; $12.50 per 100.

Frame for holding 20 cages, including cages, $3.00.

Cell-stick, each 10c; $1.00 per dozen.

Transferring-needle, double-ended and nickel-plated, 15c.

Jelly-spoon, nickel-plated, 15c.

We can supply, also, fine-pointed lace-scissors with extra large bows, for clumsy fingers, at 35c each.

⁂

Modern Queen-Rearing

A booklet of 34 pages, giving full description of methods used by the A. I. Root Company. You can not afford to do without this book if you rear queens. Price, 15c postpaid.

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Doolittle on Queen-Rearing

The old standard. Price, $1 00 postpaid.

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NOTE.—These goods and books are for sale by all dealers in bee-keepers' supplies, and furnished at wholesale and retail by The A. I. Root Company.

SWARTHMORE QUEEN-REARING OUTFIT

Prices of Complete Outfits:

Outfit No. 1—Experimental, postpaid, $1.50

1 Cell-bar	1 Holding-frame
16 Waxed flange-cups	12 Transfer-cages

⁂

Outfit No. 2—Amateur, postpaid, $3.50

2 Cell-bars	1 Needle	18 Transfer-cages
35 Waxed flange-cups	1 Holding-frame	1 Cell-stick

⁂

Ourfit No 3—Professional, by freight or express, $7.50

2 Blank bars	2 Cell-bars
3 Holding frames	1 Incubating-cage
1 Cage-pocket	1 Grace cell-compressor
1 Grafting-plug	100 Flange-cups
10 Comp. mating-boxes	2 Swarth. nursery-cages
1 Bar-holder	24 Transfer-cages
1 Swarm-box with lid	1 Needle 1 Stick

⁂

Swarthmore Books

"INCREASE" tells how to form new colonies without breaking up working colonies, postpaid, 25 cents.

"BABY NUCLEI;" how to mate queens with a mere handful of bees, 50 cents.

'CELL-GETTING," 50 cents.

⁂

Prices of Separate Parts		Post extra
Bar-holder	$ .10	4 cents
Blank bar	.05	4 "
Bottle feeder	.10	5 "
Bulb filler and feeder	.75	8 "
Breeding-queen hive	1.00	
16-hole cell-bar	.10	2 "
Cage-pocket	.25	9 "
Flange-cups, unwaxed, 1c each; per 100	.75	9 "
Flange-cups, waxed, 2c each; per 100	1.75	14 "
Grace cell-compressor, each	1.75	14 "
Grafting-needle, each	.15	1 "
Grafting-plug, each	.10	1 "
Grafting-stick, each	.10	1 "
Holding-frame, each	.10	5 "
Incubating-cage, each	.35	7 "
Mating-boxes, complete, each 20c; 10	1.50	12 "
Nursery-cages, complete, waxed cell-cup	.35	5 "
Nursery-cages, no cups	.25	4 "
Swarm-box, with lid	1.00	
Swarm-box lid only	.25	
Trap-box	.50	
T stands, each	.10	6 "
Transfer-cages	.10	2 "

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Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor | CHICAGO, ILL., JUNE 1, 1905 | Vol. XLV—No. 22

THE AMERICAN BEE JOURNAL is absolutely an independent publication, and not connected with any bee-supply business whatsoever. It stands entirely upon its merits as an educative force in the field of bee-keeping, and as a medium for legitimate advertisers in apicultural or other lines. It is the oldest, and only weekly, journal of its kind in America. Its publishers believe that it deserves to be in the hands of every would-be progressive successful bee-keeper in the land. It is in its 45th year, and to-day is acknowledged to be better in every way than at any time during its long and honorable history.

Editorial Notes and Comments

First National Bee-Convention

Dr. G. Bohrer, on another page, gives a most interesting account of the first attempt to organize a bee-keepers' association in the United States. Being a member himself he speaks as an eye-witness. He gave something along the same line at the opening of the St. Louis convention last September, but the reporter failed to get it. We regretted it very much, as it was an extremely interesting address, and being of historical value we felt that it should have been preserved. So, afterward, we requested Dr. B. to write it out as nearly as he could recall, and so we have it for our readers this week.

In addition to the contribution by Dr. Bohrer, he has kindly furnished a picture of a group of men who helped organize the first bee-keepers' association in America, which we present on the front page. We believe the only members of that group that are still living are Dr. Bohrer, of Kansas, and M. M. Baldridge, of Illinois. If any of the others are still with us, we would be pleased to announce it.

We are sure Dr. B.'s article will be greatly appreciated by all our readers.

◆

The Honey-Producers' League

We believe that so far practically all the bee-papers of this continent have approved this new organization in the main. Of course, it would be expected that some of the details would not suit all, though the few objections that have been advanced by some are not insurmountable, but can be met and corrected later on. What we mean is, that any slight defects in the constitution or management of the League can easily be rectified at the annual election next March, if by that time it is thought best to make any changes. What is needed *now* is to put the League in a position to do some effective work for bee-keepers before, or by the time, the new honey crop begins to come on the market. If during the next 30 days a sufficient number of bee-keepers would send in their annual dues, the Executive Board could plan a great advertising campaign that could be put into active operation so as to prepare the public for the reception and consumption of this season's crop ofhoney about as rapidly as it comes on the market.

We may say that practically all the United States bee-papers have published in full the Constitution and Prospectus of the League, just as we gave it on page 259.

The Modern Farmer and Busy Bee had this to say about it:

> The latest candidate for favors among the bee-keepers of the United States is The Honey-Producers' League. Its object, as expressed in the Constitution, is to create a large demand for honey by popularizing its use among the consuming public through advertising in newspapers and magazines its great value as a food, and by such other methods as may be considered advisable by the Executive Board. Also, by publication of facts concerning the production of honey to counteract any misrepresentation of the same..... The aim of the League is a good one, and the indications are that it will receive the hearty support of the leading bee-keepers of the United States.

Editor Craig, of the Canadian Bee Journal, in his May issue, writes as follows:

> The Honey-Producers' League, recently organized in the United States, is, we believe, going to be one of the most useful movements yet inaugurated among bee-keepers. We understand that for the present at least the effort will be confined to the United States. Perhaps by and by the organization will see its way to extend its border and take in Canada. At any rate, we will be helped indirectly. Something of this sort may perhaps be taken up in connection with our Ontario Association. If space permits we will next month give the text of the Prospectus and Constitution.

"A York County Bee-Keeper," in the same paper, expresses himself thus:

> When reading over the Constitution of The Honey-Producers' League, the thought came to me, "They can fight successfully honey adulteration, but how are they going to get at the producers of unripe honey?" While this organization has plenty of difficulties in the way, I think the one mentioned will be one of the most formidable. What's the matter with The Honey-Producers' League, anyway? We think it a splendid idea, and hope that in some way arrangements can be made for us Canucks to take part in the benefits. What say you, brethren?

Surely, such expressions of confidence and encouragement are appreciated, and should result in bee-keepers coming forward with their dues and thus aid in the proposed effort to help themselves through a general advertising of honey among the public.

On another page of this number Mr. J. E. Johnson offers some good suggestions and friendly criticisms. We hope his whole article will be read carefully. What the bee-keepers in his locality propose to do about selling their honey crop should be followed by the bee-keepers of every locality. And that should be done *in addition* to the advertising that the League is organized to do.

Mr. Johnson seems to think that the organizers of the League have made some mistakes. But let us see about that.

First, we think it is not likely that a bee-supply manufacturing concern that does a business of say $100,000 or more a year, is going to raise prices in order to pay its small annual dues as members of the League.

As to what Mr. Johnson thinks is a second mistake, we may say that the League has not definitely decided to offer a $10,000 reward. It may offer none at all

As to the third mistake, there is no danger of starting out too big in the advertising line, for even $5000 would be too small an amount with which to do big advertising. But we must start in a way that will impress the people that bee-keeping is more than a two-by-four business. And then, having started the advertising it should be continued several months in succession in each publication used.

It may not be known to many, but a single cream separator firm spends over $50,000 a year in advertising; several single poultry incubator firms spend $10,000 or more annually. We believe there is a certain stock food firm that spends over $100,000 a year in advertising. A full-page advertisement in the Ladies' Home Journal costs about $4000 for just one time. But it goes every month into over a million homes. Think of it! But the League would perhaps take only about one-eighth of a page in that Journal, if it went into it at all. It would not pay to take say a one-inch space in such a publication.

Let us assure bee-keepers that the Executive Board of the League will not do anything rash, or without due consideration. They all desire only the best interests of the pursuit of bee-keeping, for, their own success, like that of the honey-producers, depends upon the prosperity and success to be derived from the production and sale of honey.

Use of Springs in Supers

Super springs are found on the list of bee-keepers' supplies; but it is doubtful that they are used as generally as they would be if their advantages were known more fully. The common way of wedging up a super of sections with a straight stick may seem quite satisfactory to one who has never given the matter much attention, because when the wedge is first put in the sections are pressed together very tightly—more tightly, indeed, than the springs—but sections have a way of shrinking, especially when wet before being put together, as so frequently they must be to prevent breaking, and so it often happens that by the time the supers are put on the hives the wedges have dropped down. Springs accommodate themselves to this shrinking of the sections, and although the pressure is not quite so much, there is no entire cessation of pressure as with the wooden wedges—if straight sticks can be called wedges.

Another thing: There is no little variation in the size of wedge needed, and it is not convenient to have wedges of varying size; the result is that some supers are too loosely wedged, and some so tightly that there is danger that the supers may be pulled apart at the corners; the springs accommodate themselves to these different sizes.

The springs are easier put in; easier to take out.

It is an easy thing to try springs in a few supers. If they prove an advantage the number can be increased.

HISTORICAL

The First Convention of Bee-Keepers Held in the United States of America

BY DR. G. BOHRER

During the summer and fall of 1870 the matter of calling a convention of bee-keepers of the United States and Canada was agitated, and resulted in the decision that it should be held in the city of Indianapolis. It was held Dec. 21 of that year. Mr. N. C. Mitchell, who was then publishing what was known as the Illustrated Bee Journal, in Indianapolis, was one of the prime movers in arousing interest in favor of a convention of national character. His efforts were seconded by such men as Adam Grimm and A. H. Hart, of Wisconsin; E. Rude and A. F. Moon, of Michigan; Elisha Gallup, of Iowa; M. M. Baldridge, of Illinois, and others of that State whose names I can not now recall; Aaron Benedict, of Ohio; T. R. Allen, of New York; Dr. Hamlin, of Tennessee; Gen. D. L. Adair and J. H. Nesbit, of Kentucky; Mr. Atkins and his wife; and Mr. Scofield, Mr. Barber and myself lent the movement our support in Indiana. There were some others in Indiana who favored it, and Seth Hoagland and R. Bickford, of Pennsylvania, also supported it. R. C. Otis, of Wisconsin, attended the convention. He was the owner of much of the territory covered by Mr. Langstroth's patent. He came to examine the different hives there for the purpose of finding out if any were infringements on the Langstroth invention, and nearly or quite all were, although but one or two of the exhibitors in attendance would admit it.

A delegate to this convention from Utah, whose name I have also forgotten, purchased 100 colonies of Italian bees from Mr. Grimm while at the convention, paying him $1500 for them. This was probably the largest deal in bees that had ever occurred in this country up to that time.

At this convention A. F. Moon was elected president, and I think there was also a secretary elected—M. M. Baldridge. of Illinois. The proceedings of this convention were similar to those of bee-keepers' conventions nowadays, except that very little was said about hives, further than to agree that to successfully manage bees the combs must be movable. There was, however, quite a feeling of anxiety on the part of most of the owners of the different patterns of movable comb hives, it being generally believed that the presence of Mr. Otis meant unfriendliness toward them, which might end in prosecution for infringement on the Langstroth patent, which Mr. Otis then controlled in most, if not all, of the States and Territories.

On motion of R. C. Otis, Rev. L. L. Langstroth was made an honorary member of the Association.

During the afternoon of the first day's proceedings a telegram came to the convention from H. A. King, of New York, which read as follows, or nearly so:

"Officers and Members of the Bee-Keepers' Convention at Indianapolis, Ind.:—You are earnestly requested to meet with your bee-keeping brethren at Cincinnati, Ohio,"—giving the date, which, I think, was in February following. The convention then in session was called the "North American Bee-Association."

Mr. King was the maker of the "American" hive, and while he was selling a straight-out infringement on the Langstroth patent, he had not admitted it up to that time, and was selling more hives than any other one dealer in the country. He was a most persistent advertiser, and sold a bee-book which was quite a help to the beginners in bee-keeping.

After some discussion it was decided to accept the invitation to attend the convention at Cincinnati.

Mr. King's reason for not attending the convention at Indianapolis came out in the following statement, which he made through the press:

"The convention has been called to meet at Cincinnati because it is centrally located, free from local influences, and near the home of Mr. Langstroth, whom we want present."

Most of the bee-keepers at the Indianapolis convention were friends of Mr. Langstroth and his invention. Mr. King knew this, and also knew that most of those that were not were friends to the "Buckeye" hive, of which Mr. N. C. Mitchell was the inventor.

When the time for the election of officers for the ensuing year was announced, Mr. Otis moved that in view of what Mr. Langstroth had done in promoting the interests of bee-keeping, not only in this but in other countries, he be crowned with the honor of being the President of the North American Bee-Keepers' Association for the ensuing year. The motion was warmly seconded, and Pres. Moon was authorized to cast the unanimous ballot of the Association for him.

Mr. Langstroth was present at the Cincinnati convention, also H. A. King, A. I. Root, Mrs. Ellen S. Tupper, and nearly all who had attended the Indianapolis convention. A motion was made by Mr. King on the second day of the convention that the bee-keepers present be requested to donate a liberal sum of money to Mr. Langstroth. I opposed the motion on the ground that it would be humiliating to the man who had done so much for the interests of bee-keeping, and that every one who was deriving benefit from his invention had not paid for the right to use it, as I had done, or Mr. Langstroth would not stand in need of donations from any source. I also stated that I had not to exceed a thousand dollars with me, and might run short of funds in case I gave Mr. Langstroth such a sum as all present ought to give if the benefit was to amount to much. Rev. F. W. Clarke, of Canada, supported my statement, saying that he had heard something about Mr. Langstroth, and that among other things he had learned that a number of persons had fared sumptuously as a result of having sold to a great extent hives that embraced the Langstroth invention, and suggested that they be requested to disgorge and divide profits with Mr. Langstroth, which would probably relieve his wants. This about killed the donation move, and Mr. A. I. Root afterward wrote that at the time he censured me for having blocked this move, but that after more mature thought he concluded that I was not far wrong.

After a two days' session devoted principally to the usual subjects, this convention—called the American Bee-Keepers' Association—adjourned to meet one year later at Cleveland, Ohio, it being agreed by the bee-keepers that they would meet at the above-named city at the same time and place, disband as separate organizations, and organize as one body. There was no cause or feeling of any sort to prevent such a union, as the masses of bee-keepers had no bone of contention. The feeling that existed between King, Mitchell, and other patent-hive men was left for them to adjust either in the courts or among themselves. Mr. Quinby, the author of "Mysteries of Bee-Keeping Explained," was present, and was made temporary chairman. The late Capt. Hetherington, of New York, and Dr. J. P. Kirtland, of Cleveland, were at this convention, and also Prof. A. J. Cook, then of Lansing, Mich., but now of California. Dr. Kirtland was one of the first men of talent and rare scientific acquirements to make note of Mr. Langstroth's invention, and call public attention to its great worth.

I made a motion for the election of a treasurer, which was seconded by Prof. Cook, Rev. F. W. Clarke, and others. It was antagonized by Mr. King, on the ground that it was likely to result in loss to the members, and that at best it would involve a membership fee. This last statement was a cunning dodge, and was largely shared in by the bee-keepers present, so that the motion was lost. I then moved that a record of the proceedings of that convention be kept, and that they be published. This motion was carried without opposition-then questioned the convention as to where the money was to come from to defray the expense of publishing the proceedings. At this stage the motion to create a treasury department was about to be renewed, when King again came to the front and stated that he would publish the proceedings free of charge. He published a periodical, the name of which I do not remember, and on the strength of this offer received a number of subscriptions. One year later this new organization (now called the National Bee-Keepers' Association, if memory serves me correctly) met at Indianapolis. This was during the winter of 1872-73. I never attended another meeting of this body until the fall of 1904, at St. Louis, as I moved to Rice Co., Kans., in 1873, and kept no bees from 1873 to 1903.

Mr. Langstroth did not participate very extensively in the discussion of subjects brought before the convention. He was depressed in spirit to quite an extent, owing to the recent death of his son, James Langstroth. Besides, he could not have been very favorably impressed with the motion that was made to collect money from the bee-keepers present for his benefit—that is, if he knew about it.

He was not present when the motion was made. He afterward wrote an article concerning proposed charitable donations for his benefit, that had anything but a friendly tone. He was not at the Cleveland convention—in fact, I never saw him after the Cincinnati convention, which occurred not very long after the Cleveland convention. He wrote me concerning the loss of his wife, when she died, and during 1872, I think, he wrote me from Washington, D. C., stating that Mr. Samuel Wagner, then editor of the American Bee Journal, had died that morning of heart disease. This was the last time Mr. Langstroth ever wrote to me. Rice Co., Kans.

Contributed Special Articles

"The Honey-Producers' League," and Why It Should Be Worthy of Our Support

BY J. E. JOHNSON

HAVING sent in my dues some time ago to become a member of The Honey-Producers' League, I would like to offer a few suggestions and criticisms.

The League was organized very suddenly, the bee-keepers not being consulted or even notified, and thereby not being permitted to offer any suggestions or having any say whatever as to who should be the officers, and are asked to contribute their dollars to help advertise honey, but have no voice in the matter of how it should be done. I don't believe the organizers of this League can blame bee-keepers very much if they think as I did when this was first brought to my notice. In fact, it seemed to me that these men did not think the bee-keepers knew enough to do business for themselves, but would contribute their money if they furnished the brains and carried the money-bags. However, I am personally acquainted with Mr. York, Mr. Hutchinson, and Dr. Miller, at least to the extent that I am sure they were doing what seemed to them to be necessary, and I am sure they all have the interests of the bee-keepers at heart. No better men could have been chosen on the Executive Board.

Let me give an account of some experiences I have had in organization.

Five years ago I began trying to organize a farmers' mutual telephone system in this locality. I first began talking it up among neighbors. Oh, yes, it would no doubt be a fine thing, but they would not take one just yet. Some would not be on a line that had any other 'phone on, and each had an idea of his own as to how a line should be constructed, and nearly all differed from each other and from me. I had spent considerable time and study on the telephone question so as to adopt the proper method and be sure to get started right.

Well, I finally appointed a time for meeting, notified all my neighbors, and we met, that is, 10 of us did, but we could not agree on many points, so it was decided to have another meeting, and in the meantime we would all seek for more information and get others to come.

At our next meeting there were only 5 present, and some lived nearly 10 miles apart, so it all fell through, and they gave it up. But I was determined to get the thing started, so I went to a telephone constructor and made an agreement with him to furnish everything except poles, and build the line complete and install 'phones for $25 each, providing I could get subscribers near enough together so that each subscriber should furnish 16 poles, 60 steps apart, and thus pole the line.

I then went to my neighbors with a contract to that effect, and I guaranteed them that if after having the 'phone 30 days in their houses it proved unsatisfactory, they need not pay a cent.

Well, at first only 6 'phones were installed, but the system has now grown to something over 200 'phones, and we have absolutely free service with something like 25,000 'phones. We now pay only $2.00 per year at our home switch. Even the large cities are willing and anxious to give us free exchange, as they charge the city people 15 cents when they call us up, so they make money in that way. We just got a letter from the Peoria Independent Telephone Company, and they want to exchange with us, and I don't think any one of us would give up his 'phone for $100.

Now, I did not do all this myself, but I hit the ball the first real hard lick, and it has been rolling ever since. The organizers of The Honey-Producers' League have hit the ball a whack in their own way, and it has begun to roll. Let's help it along.

To the bee-keeper with from 20 to 100 colonies, I want to say your dues are not very much, and if you are benefited only a very little you will receive more than you give. And the specialist with 500 to 1000 or more colonies should not hesitate to pay his share pro rata, as he is in a critical period. If we have a big honey crop this year, with prices already very low, and lots of old honey left over, where will *you* be? It is very much harder to get honey to take a raise in price than it is to let it go down.

We have a bee-keepers' association in this locality called The Western Illinois. It has been growing in membership and interest ever since it was started, and our next meeting will be Sept. 20, at the Court House in Galesburg, Ills. We expect to discuss the honey-selling problem more than any other question at our next meeting. It is our intention to make arrangements to get the merchants to allow us to display our honey to the best advantage in their stores. The daily papers have sent their reporters to our convention each time, and have given a fine report of it, with large head-lines on the first page. They have treated us well, and we intend in turn to treat them well, and shall do some advertising of our home product. We shall wait on the merchants and get them to handle our product first, and if they refuse to do this we shall put a man in the field to canvass our honey from house to house, and sell in case lots in this and other cities, if we have an abundant crop (and indications are quite fair for an abundant crop).

A few years ago there was lots of honey shipped from Chicago to these small cities, but it will be the duty of our association to help sell our own crop first. Many other localities are forming local organizations and will adopt similar plans, perhaps. Thus Chicago and other large cities will not buy nearly so much honey, as it has been customary for Chicago firms to sell honey to many smaller towns in this and adjoining States. If the demand becomes less in the large towns, and the supply of honey should be large in the Western States this year, what will be the result? And I would say to the specialist, as The Honey-Producers' League offers an opportunity where both the specialists and the small bee-keepers can join hands and help each other in this matter, don't neglect your duty, but let us all pull together now, and at once. You with 1000 colonies are asked to contribute $50. That seems a great deal, but 50 bee-keepers with 20 colonies each, also contribute $50, and they probably all sell all their honey to neighbors, and near home, while you put nearly all of your honey in competition with others.

To the officers of the League let me say that I have read very carefully the account of your Chicago meeting, and the regulations or by-laws adopted, and as written by Mr. Hutchinson, and, in my judgment, one of the most unwise things in it is that you decided not to advertise until the treasury contained $5000, although you all admit that work in this line is urgently needed at once. This seems to indicate your lack of confidence in the bee-keepers themselves.

Don't blame the bee-keepers if they think in return that the supply manufacturers expect to make a future raise on supplies in order to get the money back they have contributed. A small raise would more than make it up. That would throw all the expense on the bee-keepers, with the manufacturers carrying the money-bag and using as he or the Executive Board sees fit. The manufacturer contributes one-fifth of 1 percent. The bee-keeper is asked to contribute $1.00 per 20 colonies, which, counting colonies to be worth $3.00 apiece, is one percent, or five times the rate of the manufacturer. So, don't hold too tight a grip on that money-bag, but get to work and show the bee-keepers what you can do, and they will give this cause their general support.

Mistake No. 2 is for an organization with a capital of $5000 or less to offer a $10,000 reward, or twice as much as they have on hand. That is too much on the *cure-you-right-away* plan. Mr. Hasty's plan, as given in his "Afterthoughts," is certainly a much wiser one, and worthy of consideration.

Mistake No. 3 is to pay big money for a half-page advertisement in the daily newspaper with big letters, as if the people were all deaf. Don't start out too awfully big.

Start moderately, and spend the greater part of the money after you have become accustomed to the harness, so it will be used to the best advantage.

The men who started the League are deserving of praise. We surely must adopt up-to-date methods in finding a market for our product, and I am sure the leaders in the League are safe men to tie to, and if they had not started in their own way probably nothing would ever have been accomplished. They offer to do this work without salary, and I think we should not hesitate to pay our allotted share.

There is a growing antagonism between bee-keepers and bee-supply manufacturers; also between the small bee-keepers and the specialists. This should not be so. And now, as the manufacturers have planked down their money, and invited the bee-keepers and all to join in and aid the cause of the most importance to bee-keepers, let us all meet each other half way. We are all interested in the welfare of the bee-keepers—all rests upon the proceeds of the honey crop.

Probably my criticism has been rather plain and to the point, but it is meant for the good of all.

Knox Co., Ill.

⁂

Some Remarks on Wintering Bees

BY HENRY ALLEY

ABOUT this time of the year the bee-keeper can go into the apiary on warm days on a tour of inspection, for the purpose of seeing where mistakes were made in preparing his bees for winter.

A few colonies will be found that have perished from starvation, not because the combs were not filled with stores the previous fall, but because the bees clustered too near one side of the brood-nest, and during a long, cold spell could not reach the food stored in combs at the opposite side of the hive.

Very large colonies are not apt to be caught in such a trap, but the weaker ones, if they happen to cluster in the early winter at either side of the brood-chamber, almost invariably die from this cause. Sometimes the bees select the combs for wintering and clustering upon that contain the least honey. There is but one way to help the bees out when this is likely to happen. Remove the empty combs at the side of the hive, and replace them by inserting full combs—that is, alternate the full and light filled ones so far as they will go. This work, of course, should be done as soon as the bees cease to store fall honey, as it can not be safely done during cold weather.

As soon as the honey-flow is over, bees should be packed for winter, and not disturbed thereafter.

A good way to winter bees is to let them alone from November to April. I mean by this, that under no circumstances should the interior of the hive be disturbed. Hardly anything can be done during cold weather that will in the least be beneficial to the colony, unless it be to carefully clear the entrance of the hive of dead bees.

Now a word about snow around and over the hives. During the winter of 1903–04, here in Massachusetts, we were buried in snow for four months. I spent much time digging the snow away from the hives, especially around the front ends, thinking each time that a warm day would soon come so that the bees could take a cleansing flight, which they seemed much in need of before the winter was half gone. But the warm day did not come—not one favorable day from December to March 20.

The mistake I made that winter cost me the loss of many colonies of bees. During the past winter, instead of digging the snow away from the hives, I spent my time in that direction in covering the entire hive with snow. In doing this I paid no attention to the entrances of the hives, but tried my best to seal them all up as tight as a fruit-jar. When the warm days came, which was Jan. 1 and Feb. 21, I dug the snow away from the fronts of the hives and gave the bees a chance to fly all they desired. Result, bees came through in fine condition.

In the spring of 1904 the best colony I found was in the yard of a man some six miles from my place. This colony was a swarm hived in a shallow hive-cap the previous June, then the box was placed upon two sticks of wood and directly upon the ground. This box of bees was not seen by the owner from November to April 10 the following year, and the hive contained nearly bees enough to swarm.

If a good, big blizzard comes your way, and covers your hives all over, my advice is to let them alone. Colonies in that condition need no attention, and will surely come out all right when spring opens.

As a matter of fact, a good colony of bees needs but little packing to insure safe wintering. All should use hives having outside or winter-cases, and then the snow can do the bees no injury. Some coarse material, such as burlap, over the frames is about all the protection needed in winter. Upward ventilation without much draft is a great advantage to the bees.

I recently read in the American Bee Journal a good article from the pen of Mr. Latham. I can not agree with him that a large entrance is sure to winter bees. The large entrance is all right, and actually necessary, but many other things are required to insure their safe wintering.

Two years ago I purchased 10 colonies of bees from a woman in a near-by town. When I packed the hives, I remarked to the lady, that, had those bees been in my yard the previous winter they would have died, as I did not see how the bees got out of and into the hives, as the only entrance I saw in at least two of them would admit of only one bee at a time. Yet those 2 hives of bees were in as good condition as any of the 10 colonies.

I took the bees home, and during the summer managed to enlarge the entrances of all the hives. The next winter was the hard one of 1903–04, and notwithstanding the fact that each hive had a large entrance, several of those colonies died; but the loss was not caused by the size of the entrance. It was dysentery, caused by poor food and long confinement.

Bees having poor stores for winter must have frequent flights, or many of them will die.

As a rule, I have found that 100 days, or three months, is about as long as bees, either on the summer stands or in the cellar, can stand confinement here in Massachusetts.

There is within a half mile of my apiary 200 acres of goldenrod. Just so sure as the weather during the month of September is dry, warm, and pleasant, the combs in all my hives will be packed with fall-gathered honey. The quality of such honey is not first-class, certainly not for winter food for the bees. Frequent flights of the bees in winter generally bring my bees through the winter safely. When long confined, say of two months' duration, if entire colonies do not die, the hive is greatly depleted by the bees continually getting out when the sun strikes the hive during the warm part of the day. From this it will be seen the importance of darkening the entrances with snow, or in some way to keep the bees quiet.

A good queen put in not later than Aug. 1, plenty of good honey, the hive well prepared for winter, and absolute quietness, will generally bring a colony safely through to spring.

Essex Co., Mass., March 18.

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How Bees Find a Future Home

BY G. M. DOOLITTLE

DO bees select a future home before swarming?" is a question frequently asked. As this has quite a little to do with a start (to many) in the bee-business, it might not be amiss to talk about the matter a little.

My opinion is that where one colony knows where it is to go before it swarms, five know nothing of the kind. The reasons for such an opinion are based on the following:

First, the majority of swarms cluster within 2 to 5 minutes after coming out in the air, and then send out scouts to find a place to go for a home. This is easily proven by allowing a swarm to hang on a limb for 2 or 3 hours. Now take them from that limb or place, hiving them a rod or two away, and you will find from 10 to 50 bees hovering around that limb for from hours to days. I have often seen them about such a limb 3 days after such swarm had been hived, while, if the swarm is hived at once, no bees will be seen hovering about the limb 10 minutes after the swarm has been taken from it.

Next, I have known of swarms hanging on limbs 2 or 3 days at a timet till they have built quite a little comb there, and then go off to a tree, or into some old empty hive that had been left standing in some apiary. From my own observation and that of others with whom I have conversed in this matter, five out of every six swarms alight and send out scouts in search of a suitable place for a home. If the scouts fail in finding such a place within 2 or 3 miles of where the swarm is clustered, the swarm moves off from 4 to 10 miles, when they cluster again, and again send out scouts, thus clustering and sending out scouts until a suitable place is found for a home. If a rainy day or two comes on while they are clustered out on a limb, they build some comb; and if the weather is warm, and plenty of honey is found near when it clears up again, they may cease to look further for a home, making a home of a limb, rearing brood and storing honey, the same as if in a hollow tree, a cleft in the rocks, or a hive; for the cases are by no means isolated where colonies have been found with plenty of combs, brood and honey for wintering, with nothing to shield them from the elements save the twigs and the few leaves above them. A few years ago a friend living in New Jersey sent me a queen taken from a colony which was found in October having combs and honey enough for wintering on the underside of a grape-vine. And she proved a queen above the ordinary value, too, living and doing good work for 2 years after I received her.

But there *are* colonies which send out scouts to look for a future home before said colonies swarm, as is often proven by swarms going from the hive to such selected home without clustering at all, or staying not more than 10 or 15 minutes after clustering. When but a boy I remember seeing bees searching all up and down the body of large trees, and wondered what they were doing, and later on I saw quite a number going in and out of a hole in a very large tree that stood on the edge of the woods near where we had a field of corn in which I was at work. And this continued for several days, so that I should have thought there was a small swarm in there had it not been that the bees worked through that hole only from about 9 a.m. till 4 p.m. A few days later a swarm came from one of the few hives which my father kept at that time, and went straight to this tree without clustering at all.

About this time a person about 4 miles from me purchased some Italian bees, the first that had come into this part of the country, and, being interested in the same, I often went to see them. One day, on going to see him, he told me that at an out-apiary which he was working, which contained only black bees, he had noticed in the forenoon Italian bees at work cleaning out an old hive which was left there by the person of whom he bought the bees, the same having some empty comb in it. As this was something new to him, he seemed considerably excited over the matter, and said he should keep watch and see what became of it. I was also much interested and told him what I had seen, as related above.

The next time I went to see him he told me that the bees which he saw cleaning the hive were his own, as a few days later a swarm came from one of his Italian colonies, and, after circling around a few times, they started off in the direction of this out-apiary. Having a fleet horse near at hand, and being a fearless rider, he jumped upon it, and in a moment was going at railroad speed for his out-apiary, arriving there in time to see his swarm rushing pell-mell into the hive that the bees had been cleaning out. As he kept the wings of all his queens clipped, he knew that he could soon tell for a certainty whether these were his bees or not, although he had no reason to doubt that they were; for if they were, he had their queen at home in a cage, and sooner or later they must return to her unless they had come across some queen in their flight. In about half an hour they became uneasy and began to leave the hive, seeing which, he returned home only to find them coming back and running into the hive from which they went, and clustering about the cage containing the queen which he had left at the entrance of the old hive. Wishing to see more of the matter he liberated the queen, allowing her to return back with the bees. The next day they swarmed again, and again went to this hive at the out-apiary, the same as before. This they kept up for 4 or 5 days, the bees going to that hive which they had cleaned out, without clustering at all, each time they swarmed. After he became satisfied that colonies did select a home before they left their old home, and becoming tired of having them swarm so much, he divided the colony, thus putting a stop to their swarming.

A neighbor to whom he told this circumstance, took advantage of it by way of procuring some hives and a few frames of empty comb, which he placed in these hives and put them in trees and out-of-the-way places, till he soon had an apiary of his own, without even so much as hiving a single swarm.

Bees seem more inclined to go into places where there is a little comb than into places with no comb; but where comb is left in hives for such purposes, said comb must be free from pollen and spread well apart, or the moth will lay eggs in them, and they be eaten up with worms unless the bees happen to take possession of them before the larvæ of the wax moth do.

Onondaga Co., N. Y.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Unreliable Bee-Information

A good friend in Michigan sends a clipping from that excellent periodical, The Epworth Herald, which emphasizes anew the fact that it is not a safe thing for any other than a bee-paper to publish matter about bees without first submitting it to some practical bee-keeper. The article is styled, "Safeguarding the Queen," is reliable in the main, and written in an interesting manner, but some of the items would hardly be endorsed in their entirety by a two-thirds vote of the sisters. For example:

"Indeed, it is practically impossible for an intruder to enter a strange hive without discovery. And discovery means instant death and dismemberment."

And yet thousands of bees, upon returning from the fields, have entered wrong hives and received a kindly welcome. Did any of the sisters ever observe a case of "dismemberment," as mentioned?

"These honey-gatherers are not permitted to feed the queen direct. When they enter a hive they must give a mouthful to two drones waiting on guard. If the sample proves satisfactory the bees carry the nectar to the storeroom, where it is mixed with what the other workers have gathered. When the hive-cells are full, the workers and drones sample the mixture again, and then seal up the cells."

That leaves us all agape for fuller information. During the weeks when no drones are in the hive, what is done with the mouthful that should be given to the "two drones waiting on guard?" What weapons of offense or defense do those "two drones waiting on guard" use? "If the sample proves satisfactory the bees carry the nectar to the storeroom," but if the "two drones" do not O. K. it, what is done with it? Is there not danger that the "two drones" will be overworked when the workers are pouring into the hive with their loads at the rate of a hundred or more in a minute? When the cells are full, and the mixture is sampled again, do the same "two drones" do the second sampling?

Other questions may be asked when the foregoing are answered.

* * *

An Austrian Sister "Skirts" Bees

The following account of what one of the sisters did in Austria is from the American Bee-Keeper:

"Jungklaus also tells how a young woman captured a swarm of bees. Being on a tramp, she found a swarm of bees hanging on a bush. Wishing to secure it, she took off one of her skirts, tied up one end, and, by the help of sticks, spread it out in such a way that she could hive the swarm into it. After the bees had all moved in, she tied up the other end of the skirt and thus carried the swarm several miles to her home. ('Well done.')"

We have twice had a somewhat similar experience. Once on our way to the Hastings apiary—which is about 5 miles distant—when about half way there we were offered by one of the neighbors a small swarm of bees which hung on a willow-tree by the roadside. Dr. Miller thought it would not pay to bother with them, as we had no way of carrying them, when I suggested my bee-hat—a broad brimmed straw-hat with a veil sewed around the outer brim, having a rubber cord run in the lower edge. He rather thought it might work, and as the bees were hanging on a convenient lower limb, we commenced operations at once.

Dr. Miller trimmed everything down as close to the swarm as possible, then carefully cut off the limb with the swarm, and while I held the hat upside down and stretched the rubber cord as much as possible, he slipped the swarm inside, while the veil was secured about the limb above the swarm, and we started on our way once more, I carrying the swarm by the end of the limb. When we reached the apiary we got a hive full of empty combs ready and let the bees run in, and I once more had possession of my hat.

Once later, when we had occasion to hive a small swarm at some distance from the Wilson apiary, we used the hat again in preference to carrying a hive that distance.

* * *

Wintering Bees—Good Prospects

I want to report on my good luck in wintering the bees last winter, as it was very cold. I was away from home last fall when I ought to have been packing my bees, so I left them on the summer stands. The stands are from 8 to 24 inches from the ground. I lost 3 colonies out of 21, so I now have 18, all in good condition. The 3 that died were late swarms, and they did not store honey enough to feed them. We did not have a very good honey crop last season. A hail-storm ruined the first crop of alfalfa. I got 500 pounds of comb honey, and increased from 14 to 21 colonies. We have a good prospect for the season, if all goes right. Success to all bee-keepers. Mrs. Ben Ferguson.

Ford Co., Kans., May 8.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.

By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

AMOUNT OF CAPPED SECTION-COMB SURFACE.

Some of our expert answers to questions are a little depressing to the apicultural student by the amount of disagreement in opinion which they show. The student aforesaid may be reassured by the answers to question 25. Out of 29 respondents 22 either say the whole surface of a section should be sealed, or all except the cells next the wood. None of the other respondents lean in any other direction very strongly. One answer would tolerate 15 percent unsealed in *second-class* honey; another would allow 5 percent in first-class; and that's about the extreme in that direction. Page 293.

CHEAP SECTIONS—FOUL BROOD.

"Lickin' good, Sal, why don't you get you some?"—as the bumpkin remarked to his girl about the stick of candy he purchased. Greiner's worse than that. Sal could, and probably did, buy the stick of candy; but we *can't* buy a nice supply of two-dollar sections to be kept as an emergency reserve.

Sure enough! If our appointed eradicators of foul brood at times become distributors of foul brood, and carry it into territory previously unpolluted, it surely becomes us to "look a little out." Page 294.

A CORRECTION ABOUT PROF. HARRISON.

Lumber and literature both liable to "nots!" In the former always detrimental; in the latter often beneficial. Vide the not that turned up missing in the first line of my third caption, page 296. Also, when the knots of lumber drop out they always leave a hole to tell the tale; but no hole is left to hint that Prof. Harrison is *not* the objectionable bee-doctor he is there alleged to be.

NOTICING "STRANGE" BEES.

The phrase, "I have noticed strange bees," seems to suggest that a less careful observer might have failed to notice them. That would hardly be the case with an onslaught of robbers. The peculiar language made me wonder a little if "Illinois" was not mistaken about what he saw. Possible to mistake extra-faithful guards for robbers. Sometimes guards galore get well out on the alighting-board, running at every bee that alights, saying, "Halt, there, and give the countersign." And the bee thus rudely collared says, "I haven't the last countersign with me; but here's something just as good;" and thereupon uncorks something from the inside pocket. Page 297.

DAUGHTERS OF BEST QUEENS AND OTHERS.

The fact Dr. Miller alludes to on page 297, is one of the most trying ones with which we have to deal. Left entirely to herself, the best queen in the apiary will die and leave but one daughter; while the most undesirable one of all will leave a host of daughters. If it wasn't for this one ugly fact one might almost object to breeding queens, and advocate systematic letting alone.

WEAK NUCLEUS BUILDING WORKER-COMB.

"Curis!" Curious how much we don't know—some of us. Dr. Miller says, on page 313, that a queenless nucleus will build worker-comb if weak enough. I wonder greatly *why* extreme weakness should make such a change—in a rather mysterious thing. In my journeys through the forests of Ignotum, I don't think I ever encountered that little fact before. Thanks, Dr. Miller!

PREPARING FOR SWARMS THAT DIDN'T COME.

So E. Tucker made lots of hives to be prepared for the excessive swarming of his Carniolans—and not a swarm for two years. I suppose that that quaint proverb, "The unexpected always happens," applies a little more frequently to bee-keeping than to almost any other vocation. Page 317.

ADVERTISING HONEY IN CANADA.

The great publications of the United States have many readers in Canada, I believe, while Canadian publications circulate but little here. It follows that when honey comes to be advertised heavily the Canadians will have "a soft thing of it;" can just do nothing, and in so doing get a good share of the results. And if they choose to organize and put some ads. in their own papers, it will come in as additional and cumulative, and count much more than the same would if put in just now. They're all right anyhow. And also our folks were right in not trying to run two nations in the same advertising League. Otherwise they would have speedily heard that the Canadian [newspaper] widows were neglected in the daily ministration. Page 323.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to Dr. C. C. Miller, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Starters—Fastening Foundation—Painting Bottom-Boards

1. In Bulletin No. 133, Department of Agriculture, telling about the value of foundation in comb-building, only one end of the starters is fastened to the sides of the section. Is this best, or should it come against both ends? I bought some super foundation the other day that measured 14½x3¾ inches, and as I use 4¼x4¼ plain sections, it will not nearly make 4 starters, the width of the section.

2. How does the Parker foundation fastener fasten one-inch starters to sections, that is, are they held by wax or simply pressed against the sides?

3. Is it best to paint the bottom-board all over, or only that part which the bees do not come in contact with?

4. Does it not need anything to keep supers and covers from blowing off of dovetailed hives? Missouri.

Answers.—1. If a single starter is put in a section, it must be fastened only at the top. If fastened only at the bottom, the foundation is likely to sag enough to make it bulge out to one side. Your foundation, when cut in four pieces, will leave a space of about half an inch at the bottom. The result will not be much different if the space were only half as much. But the better plan is to have a ⅝-inch starter at the bottom.

2. Simply pressed hard into the wood.

3. Usually only the outside part is painted. It would do no harm to paint all, but the bees are likely to paint their part well enough.

4. In the early spring, when bee-glue is hard, if the hives are in a windy place, it is well to have a small stone on the cover, unless the cover is otherwise fastened. At other times there is no need.

Rearing Queens—Keeping Italians Pure

1. When I want to rear queens, and I put the prepared cells into Titoff cages, do I put the cages into a queenless colony, or is it all right to put them in the upper story of a queen-right colony?

2. After the queens are hatched out is it all right to leave the queens in the cages in the queen-right colony until needed?

3. How am I to keep my Italian bees pure? Suppose I have two Italian colonies, and the queens I rear from one colony are to be mated. Do I have to take the virgin queen some distance away, and the drones of the other Italian colony with her, to be sure she is mated with an Italian drone? Please describe how I am to arrange the matter so as to be sure of pure mating. Ontario.

Answers.—1. They are more sure of proper attention in a queenless colony.

2. No, before they are needed for use they must be kept where they are free to fly out to meet the drones.

3. You may as well make up your mind first as last that under ordinary conditions you can not be sure of keeping pure blood. Some claim success by confining the queens and drones during the hours of the day when drones fly, and then by feeding to induce flight at a later hour in the day. You can succeed without question if you have your queen beyond the flight of any but the desired drones; but that means, according to some good authorities, that they must be 4 or 5 miles away from other bees.

Indian Turnip

On page 312, there is a recipe for a cough cure by W. T. Mundy. What is Indian turnip? May be it is those roots we call Indian potatoes, the stalks of which grow up to a height of 3 to 4 feet, with yellow flowers on top. Minnesota.

Answer.—No, it doesn't grow 3 to 4 feet high; it is less than a foot high. It is a 3-leaved affair, and the blossom and fruit have over them a hood which gives the plant its other common name, jack-in-the-pulpit. The botanical name is *Arisaema triphyllum*. If you bite a little piece of the bulb or root, it doesn't seem just at first to have a very strong taste, but after a second or two it begins to bite and burn your mouth, and keeps it up in quite a painful manner.

Wintering Bees—10-Frame Langstroth Hives—Shaken or Driven Swarms

1. I am greatly interested in using the 10-frame Ideal super as a hive-body for swarms. Do you think I could winter a colony in one of these 10-frame supers in this locality?

2. Would the 10-frame super full of honey (if I used one super) be enough for them to winter on, or ought I to leave enough empty combs for them to cluster on?

3. I have 10-frame Langstroth hives. Do you think I would do better with them in this locality? There has been a very poor honey-flow in the last 4 years.

4. I made a second drive of newly-hatched bees last season, 19 days after making the shaken swarm. After all of the bees in the second drive had entered I placed an entrance queen-excluder to control drones. The next morning I found nearly all of the bees dead,

and almost completely clogging up the entrance. Do you think this second drive is a success generally? MAINE.

ANSWERS.—1. Two ought to winter well, and possibly one might.

2. The one story of frames filled with honey would be enough, but a second story, or something in place of it, must be under to give the bees room to cluster. I am not entirely sure about it, but I think an empty super would do without any combs in it.

3. You can try the change on a small scale, making a comparison of the two side by side.

4. So far as reported, second drives are usually successful. Your experience hardly has anything to do with the success or failure of the second drive. The death of nearly all the colony would seem to have been due to suffocation on account of the entrance having been too much closed, and it might have been the same if there had been no drive.

Preventing Leaky Hive-Covers

We find it very difficult to keep our hive-covers in a condition so that they will not leak. If you know of any paint, or other preparation which we can use to prevent the leakage in question, please give directions for its preparation. MICHIGAN.

ANSWER.—It is a very difficult thing to make a cover water-proof with any kind of paint if there are joints or cracks in the cover. The better way is to cover the wood with something that will not leak. Some of my covers are covered with a paper and the paper painted; another lot is covered with tin and painted; and what perhaps is the best, another lot is covered with zinc, unpainted. How long the last will do without paint I don't know.

Putting on Supers—Feeding Bees—Queens Humming

1. When shall I put on the first supers? The colonies have much brood now.

2. What time will the bees swarm this month, when the brood is as much in my hives as I mentioned above?

3. I am still feeding them equal parts of sugar-water, and they take it all. Is this right?

4. What makes the queens hum so loudly for about 5 minutes at a time, then rest a little while, and begin again? WISCONSIN.

ANSWERS.—1. When you see bits of very white wax plastered on the top-bars or upper part of the combs. Or, as you are in a white clover region, watch sharply for the very first white-clover blossom that puts in an appearance, and put on supers a week or so later.

2. I don't know; and your telling me that they have "much brood now" does not help very much to decide. But it is not at all improbable that they will not swarm at all in May, the month in which your questions are written. You can only tell anything in advance about their swarming by looking in the hives and seeing when queen-cells are started.

3. It will probably do no harm, but it ought not to be necessary to feed when fruit is in bloom.

4. I don't know; I never before heard of anything of the kind.

Strengthening a Weak Colony

How would it do to set a weak colony of bees in the place of a strong colony, so that the worker-bees of the strong colony would go into the hive of the weak colony, thereby strengthening the weak colony? CALIFORNIA.

ANSWER.—The plan is hardly advisable on account of danger to the queen from the entrance of strange bees. A safer way is to take a frame of brood with adhering bees from the strong colony and give it to the weak. I have given hundreds of frames of brood in that way without injury to the queen. An entirely safe plan, and one that is very little trouble, is to exchange a frame of sealed brood for one containing unsealed brood and eggs, of course taking the mature brood from the strong and giving to the weak.

Separators—T Supers

1. Do you use separators between two bee-way sections, and if you do, what kind of separators?

2. Are you still using the old T super?

I am using 4¼x4¼x1⅞ two-bee-way sections, with top and bottom starter, without separators. This is my second year of bee-keeping. ILLINOIS.

ANSWERS.—1. I use loose wooden separators one-sixteenth inch thick.

2. I am still using the T super, after having tried others. For home use you need no separators. If you pack in shipping-cases, you will need them. Even in the home groceries, unless you use separators, you will find the grocers, in handling, will break the cappings more or less.

Sulphur for Mice in Cellars

Will sulphur hurt the bees if I sprinkle it in the cellar in the winter to keep mice out? MINNESOTA.

ANSWER.—Not a bit.

Prevention of Swarming—Queenless Colony—Increase—Transferring

1. I am a beginner, and have 8 strong colonies in good hives. I have timber work, to which I am afraid I will be obliged to give my attention the last of this month and all of next. I don't know how to manage the bees to keep them from swarming during the day, as I leave early in the morning and get in about 8 or 9 o'clock at night. I furnish timber for a coal-mine which is shut down now, but there is talk of starting it up again, and if this is done I can not watch my bees. Should I neglect the timber I would lose more than the bees are worth. How can I keep them from swarming and getting away from me?

2. This spring I had a colony in a box-hive which I transferred to a frame hive. I found they had no queen, but a little brood all sealed, and two queen-cells. This was about the first of April. The queens hatched but disappeared. The bees worked all the time bringing in pollen, but tried to build cells or cups for queens. I let them go until about the middle of April, then gave them a frame of brood from another hive. They took care of the young bees from the eggs up to the bees, but made no attempt to build queen-cells. I tried another frame of brood and eggs. After a week I took a peep and hardly knew the frame, as it was an empty frame to start with, in each end of which I had fastened two pieces of comb. I then gave it a strong colony which patched it up and built it about half way down. The queen followed up closely, and seemed to lay eggs in the cells as fast as they were built. They had had it only about 3 weeks, and had it full of brood and eggs. I gave the frame to the queenless colony (as before stated), and after about a week I took a peep, and to my surprise found it built nearly to the bottom, the brood nearly all out except a patch which was eggs when I put them in, but no cells started. I gave them another frame of brood and eggs and left it 3 days, then took a peep, and just as I expected, no cells were started. I think I could have the patience of Job if it were necessary, but I thought I had fooled long enough, and so put the frames back in the other hives. Then I took the bottom off and set them on another hive, aiming to unite them. I had tried them with 3 frames, one of brood and two of comb on each side to one side of the hive, and had tried them with 4 and 5 with the same result. Why did not these bees try to rear themselves a queen?

3. I wish to have as many colonies as possible to start with next spring. I have thought of starting a number of nuclei, taking brood from old hives and building them

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up gradually as they grow in strength, to take care of the brood, and I have thought of going through them each week to look for queen-cells, and when I find them I will suppose they are getting ready to swarm. Then I shall divide them, giving one colony the cells and the other the queen. And I have thought of clipping the queens' wings so they can not fly.

4. Neighbor No. 1 had neighbor No. 2 transfer a colony about the last of May from a log hive into a frame hive with a comb where other bees had died from starvation, but he did not transfer the brood. The bees left the hive, and No. 2 says the bees won't stay without their brood. Is he right? ILLINOIS.

ANSWERS.—1. One way is to have queen-traps on your hives, so the queen will be caught when the bees swarm, and then you can shake the bees on frames of foundation. Another way is to go through your colonies every 8 or 10 days, and shake the swarm when you find queen-cells started. You may shorten the labor by shaking the whole 8 colonies as soon as one or two start queen-cells.

2. I don't know. I only know that sometimes bees refuse to start queen-cells, especially those that have been queenless a long time. When a colony is queenless early in the season, it is generally better to break it up than to try to have it rear a queen. If it does succeed in rearing a queen she is very likely to be worthless.

3. It is all right to clip your laying queens (of course not virgin queens), for then if a colony attempts to go off you can lose only the queen, and not both queen and bees. You can probably make your plan work all right. Here's another way, one which will give you increase and save watching for swarms: As soon as the first colony starts queen-cells, go to each colony, take away its queen with two frames of brood and adhering bees, being sure there is some honey in the frames, and put in an empty hive on a new stand. A week later take the old hive off its stand, and put in its place the hive with the queen. Then divide the old colony in two, and put each half on a new stand (one of them may be put on the stand from which you have just taken the queen), being sure that each half has a good queen-cell. If queen-cells are started in any colonies before the queen is taken away, then you must make the division sooner, or there may be danger that a swarm will go off with a young queen.

4. A colony transferred without brood is more likely to desert than one with brood. If he transferred the bees into the hive, and then set the hive just where the log-hive had been, the bees would stay ever so much better than if he set the new hive in a new place.

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Reports and Experiences

Bees Doing Well

My bees did poorly last season, but have done well so far this year. They began swarming in fruit-bloom. White clover is very thick on the ground. S. G. KILOORE.

Madison Co., Ohio.

Selling Light-Weight Sections

The question of light-weight sections has many sides. Some grocers about here much prefer to buy comb honey in the case by weight. Where the sections hold but 13 or 14 ounces they of course sell these same sections by the section. In this State to-day grocers buy No. 1 white clover comb honey, delivered, at 17 cents per pound by the *case*, and sell by the *section* at 18 cents. The most of their profit comes from the 3 ounces short weight of each section sold. Last fall they bought the same honey at the same price, and sold it for 20 cents or 21 cents per section, thus making a very good thing of it for themselves. HERBERT W. DENIO.

Hampden Co., Mass., May 8.

A Beginner's Outlook

I have just started in bee-keeping, and have 35 colonies. I have the native bees crossed with Italians. I have one colony that is extra good. They resemble the blacks, except that they are longer and are shaped more like a queen. What kind of bees are they, and what are their value? There are hybrids in the same hive. They work better than any bees I have seen, coming in heavily loaded and they don't seem to want to swarm, but are busy storing honey. I have given them an entrance ¾x12 inches, but they crowd that space in going in and out. They are in an old-fashioned box-hive. Christmas week it weighed 106 pounds, the hive itself weighing perhaps 25 or 30 pounds. I have placed this old hive on top of a new one, and let them pass through the new one to go up into the old one. I think I can get them in a new hive in this way without much trouble.

I have just sold some comb honey to a lady whose home is in Birmingham, Ala. She said she could not buy honey there, as what was sold for it did not taste like honey, and the comb seemed to be a good substitute for chewing-gum, so she had to taste of my honey before buying it. She intends to ship some to her children at Birmingham. She said she was glad of the opportunity to purchase comb honey made by the little bees.

D. R. PHILLIPS.

Jackson Co., Ga., May 16.

Dovetailed Hive—Making One's Own Supplies

In reference to the talk between "A Reader" and Dr. Miller, page 329, I believe Dr. Miller should have said the "Langstroth hive" instead of the "dovetailed hive." He says that custom makes the name "dovetailed hive" apply only to hives containing frames 17⅝x9⅛, and that any other understanding of the word "dovetailed hive" would throw out of gear the catalogs and bee-literature in general. According to this we have no "Langstroth hive," the nearest approach to it being a dovetailed hive having the Langstroth dimensions. If the catalogs and bee-literature are at fault, they should right themselves. The name "Langstroth hive" rightfully belongs to the common single-walled hives containing frames 17⅝x9⅛, whether the corners are dovetailed, halved, or otherwise. It should be the pride of every bee-keeper to perpetuate the memory of Father Langatroth. How can we do this better than to have a hive bearing his name?

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Is there any better proof than this, that we satisfy and please our customers?
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They are the ROOT GOODS, and we sell them at Des Moines at Factory Prices.
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We carry a large stock and greatest variety of everything needed in the Apiary, assuring BEST goods at the LOWEST prices, and prompt shipments. We want every bee-keeper to have our FREE ILLUSTRATED CATALOG, and read description of Alternating Hives, Massie Hives, etc. WRITE AT ONCE FOR CATALOG

AGENCIES.—Trester Supply Co., Lincoln, Neb.; Shugart & Ouren, Council Bluffs, Iowa; Fulton & Ford, Garden City, Kan.; I. H. Myers, Lamar, Colo.; Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex. KRETCHMER MFG. CO., Red Oak, Iowa.

Dittmer's Foundation is the Best.

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Full line of SUPPLIES, wholesale and retail.

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GUS DITTMER, Augusta, Wis.

GOOD DISCOUNTS ON EARLY ORDERS

COMPLETE STOCK OF BEE SUPPLIES--LEWIS CO.'S AT FACTORY PRICES

MUTH SPECIAL HIVE THE BEST DOVE TAIL MADE
SEND FOR CATALOG.

WE ARE ALWAYS IN THE MARKET TO BUY HONEY--SUBMIT PRICE.

THE FRED W. MUTH CO.
51 WALNUT STREET, CINCINNATI, OHIO.

CAR-LOADS

of Lewis' B-Ware come to our city for distribution. We carry a large stock which enables us to make immediate deliveries. We invite your inquiries for prices, Catalog, etc.

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Davenport, Iowa.

The Rietsche Press

Made of artificial stone. Practically indestructible, and giving entirely satisfactory results. Comb foundation made easily and quickly at less than half the cost of buying from the dealers. Price of Press, $1.50—cash with order. Address,

ADRIAN GETAZ,
44Atf • KNOXVILLE, TENN.

☞J. G. Goodner, of this State, writes me that he "prefers to pay $25 for a Rietsche Press than do without it."—A. G.

Please mention Bee Journal when writing.

Wisconsin Basswood Sections
And Prompt Shipments
Is what we are making for our customers.
— DOVETAILED HIVES AND SHIPPING-CASES —
We carry a full line of SUPPLIES. Ask for Catalog.
THE MARSHFIELD MANUFACTURING CO., Marshfield, Wis.

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G. B. Lewis Co's Goods at Factory Prices

We carry a most complete line of BEE-KEEPERS' SUPPLIES. Send for catalog. It's free. Foundation Cutter free with each order, if you state where you saw this ad.

13Atf NORRIS & ANSPACH, Kenton, Ohio.

does not satisfy me so far as the name is concerned. In short, let us not call it the "dovetailed hive," but the "Langstroth hive."

Mr. E. E. Hasty's article on the bee-supply manufacturers' trust, page 248, is a stroke straight from the shoulder, and it struck the key-note. That there is such a trust most bee-keepers know, and we should speak and write of it in such a plain way that the trust may know that we know it. "Actions speak louder than words." Let those that can and have the time, make their own hives, frames, etc. This can be done in winter and on rainy days, when there is but little else to do.

I started in bee-keeping in 1900, by buying one colony of Italians in a box-hive. With the exception of that box-hive I have never owned a hive or a frame that I did not make. I use the 8-frame Langstroth. I have two small circular saws—one for cutting off and one for ripping or cutting lengthwise. They are run by hand-crank power. The hives I make are halved cornered. The frames have the double saw-kerf. With this outfit it is easy to make hives, frames, covers, bottom-boards, hive-stands, supers, section-holders, shipping-cases, etc. In fact everything needed except sections and separators. I am well-informed on the prices of bee-supplies, and I save money by making my own hives, etc.

L. V. RICKETTS.

Whitman Co., Wash.

Bees in Good Condition—Fair Crop Last Season

Bees wintered poorly here last winter, my neighbors losing from one-half to all of theirs. I packed mine carefully last fall, and saved 38 of the 45 colonies that I packed in winter quarters. What colonies I saved were strong, all had plenty of honey, and have built up so that they will be in good condition for the honey-flow when it comes.

I had a fair crop of honey last year, 38 colonies giving me 2200 pounds of honey and in-

THE ELGIN HIVE

That's the hive which can be knocked down and put up by any one in a few minutes. No nails or dovetails needed. Iron attachment holds the same together perfectly air tight, and keeps it from warping. Send for Circular. Address,
G. H. KIENZLE,
E. end Kimball St. Bridge, ELGIN, ILL.

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Original
Direct Draft
CLEAN
Bee Smokers

4 Largest Sizes Soot Burning
Never Go Out
And last from 5 to 21 years

Pat'd 1878, '82, '92 & 1903

Tin 4-in. Smoke Engine 3½-inch 3-inch 2½-inch 2-inch Wonder
$1.50. $1.10. $1.00. 90c. 65c—per mail.

Sent on receipt of price per mail.

T. F. BINGHAM, Farwell, Mich.

OTISVILLE, PA., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. FRED FODNER.

"DADANT'S FOUNDATION"
IT EXCELS.

* * * *

WE GUARANTEE SATISFACTION.

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BEE-SUPPLIES
OF ALL KINDS.

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Beeswax Wanted at all Times.

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DADANT & SONS, Hamilton, Ill.

For Queens SEND TO JOHN W. PHARR Berclair, Tex.

He will furnish at same prices as last year: Tested, $1; Untested. 75c; 5 for $3.25; 10 for $6; 15 for $8.25; 25 for $12.50; 100 for $45. He breeds Goldens, Carniolans and 3-Band Italians. Also 1, 2, and 3 frame Nuclei, and full colonies. Prices given on application. Pharr pays the freight, and guarantees satisfaction on all Queens. To do justice and judgment is more acceptable with the Lord than sacrifice. —(Prov. 3: 21.) 6Atf

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One-Piece Sections
"Columbia Brand"

Strictly High-Grade in Timber, Quality and Manufacture.

Prices on application.

COLUMBIA MFG. CO. ANTIGO, WIS.

Please mention Bee Journal when writing

Do You Need Queens?
By Return Mail?

If so, we can fill your order with the best Queens that money can buy. Try our strain of 3-band Italians; they will not disappoint you with empty supers. Untested Queens, 75 cents; $8 per doz. Tested Queens, 1 each. Send for circular. **J. W. K. SHAW & CO.**
13Atf LOREAUVILLE, Iberia Par., LA.

Please mention Bee Journal when writing.

creasing to 46 colonies, but then I am the only bee-keeper in this neighborhood who takes any bee-papers or buys any bee-books.

D. E. ANDREWS.

Monroe Co., Ind., May 5.

Great Honey-Flow in California

We are having the ideal conditions for a great honey-flow here at the present time. I know a man who has kept a colony of bees on the scales for years, and has the record this year. He secured 22 pounds one day last week, and 24 pounds the next day. We have had some very warm days, and the bees have been wild with their opportunity to work and store. I have never seen the like of bloom that now decks our fields, canyons and hills. The black or ball sage is in bloom and the white is just beginning to open. Both of these incomparable honey-plants give rich promise of a great yield of honey this year. The plants show a growth and vigor that only our abundant rains will explain.

The salvias also are out in force, and are very attractive to the bees. One of these, Salvia carduacea, is a wonderfully beautiful plant, and I have wondered that it is not in cultivation, the world over, for ornament. It has a ball of exquisitely beautiful lavender flowers, and the stem passes through this, and then there is another ball of the bloom, and so on there may be five in extreme cases. The foliage is woolly, and the flowers are as fine as any sage bloom that I have ever seen. The foliage looks like that of the thistle, and hence the scientific name which means "thistle Salvia."

We have another Salvia of like habit, which is far more common, Salvia columbariæ, and though not as showy as the other, it is a good bee-plant and helps the bee-keeper not a little.

We also have many phacelias, all of which attract the bees and add to the stores in the hives. I have wondered if we might not plant more of the winter blooming acacias, and eucalypts, so as to give more winter work for the bees, and thus have brood-rearing com-

—ITALIAN—
Bees, Queens and Nuclei

Choice home-bred and imported stock. All queens reared in full colonies.

One untested queen......	$ .90
One tested queen.........	1.10
One select tested queen..	1.40
One breeding queen	2.20
One comb nucleus (no queen)..................	1.10

All grades ready to send by return mail.

Safe arrival guaranteed
For prices on quantities and description of each grade of Queens, send for free price-list. **J. L. STRONG.**
204 East Logan Street CLARINDA IOWA.
14Atf Please mention the Bee Journal.

HONEY-JARS.

For a limited time we offer No.25 Honey-Jars, porcelain cover, metal screw cap, holding one pound of honey net, one gross in case complete in 5-gross lots, $4.00 per gross; less quantities, $4.50 per gross, f.o.b. New York. If you want to secure some, let us know at once.

HILDRETH & SEGELKEN,
265 & 267 GREENWICH ST., NEW YORK, N. Y.
11Atf Please mention the Bee Journal.

IN THE HEART OF MICHIGAN

Within a hundred miles of me are over ¾ of the bee-keepers of Michigan. I am on the Pere Marquette R.R., which completely covers this region. Root's Goods, Factory Prices, Prompt Service, Low Freight. Send for Catalog.

GEORGE E. HILTON,
15A12t FREMONT, MICH.

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ILL.

5 short city blocks north of the C. & N.W. R.R. passenger station.

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Best and most direct Shipping Point in the World.

We have on hand a large stock of

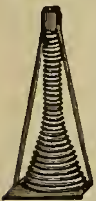
Lewis' Popular Bee-Supplies

Consisting of Hives, Sections, Shipping-Cases—everything used by the practical, up-to-date bee-keeper.

Catalog and prices on Honey on application. If you want **Good Goods at Factory Prices and Prompt Shipment**, send your orders, or call on us.

BEESWAX WANTED—28c cash, or 30c when taking Bee-Supplies in exchange—delivered here.

Queen-Clipping Device Free!



The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. It is used by many bee-keepers. Full printed directions sent with each one. We mail it for 25 cents; or will send it FREE as a premium for sending us One New subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

GEORGE W. YORK & CO.,
CHICAGO, ILL.

Queens! ITALIAN Queens!
By Return Mail

Queens from Root's Red Clover Stock and Golden Italian Queens, the best honey-gatherers in America. Untested, 50c each, or $6.00 per dozen. I guarantee safe delivery. Send your orders to

E. A. SIMMONS,
22Atf FORT DEPOSIT, ALA.

QUEENS ITALIAN QUEENS
BY RETURN MAIL.

Try Taylor's 3-banded leather-colored and 5-banded Golden Queens—the best honey-gatherers in America. Untested, 75c each, or $8 per dozen; tested, $1, or $10 per dozen; select tested, $1.50 each; breeders, the best, $3 each. I have been breeding queens for 17 years, and I know what a good queen is. No small queens sent out. I guarantee safe delivery. Send your orders to J. W. TAYLOR, Ozan, Ark.

16Atf Please mention the Bee Journal.

Please mention Bee Journal when writing.

Golden Queens and Bees

Ready June 1. Hustlers for honey; very gentle, non-swarming. Price-list now ready—also an 8-page leaflet on queen-rearing, including my experience in curing pickled brood, black brood and bee-paralysis, sent free to all who apply.

HENRY ALLEY,
13Atf WENHAM, MASS.

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A Standard-Bred Italian Queen-Bee Free!

For Sending One New Subscriber.

As has been our custom heretofore we offer to mail a fine, Untested Italian Queen to the person who complies with the following conditions, all of which must be strictly followed:

1. The sender of a new subscriber must have his or her own subscription **paid in advance** at least to the end of this year

2. Sending your own name with the $1.00 for the Bee Journal will not entitle you to a Queen as a premium. The sender must be already a paid-in-advance subscriber as above, and the new subscriber must be a NEW subscriber; which means, further, that the new subscriber has never had the Bee Journal regularly, or at least not for a whole year previous to his name being sent in as a new one; and, also, the new subscriber must not be a member of the same family where the Bee Journal is already being taken.

We think we have made the foregoing sufficiently plain so that no error need be made. Our Premium Queens are too valuable to throw away—they must be **earned** in a legitimate way. They are worth working for.

We will book the orders as they come in and the Queens will be mailed

Will you have one or more?

If you cannot get a new subscriber, and want one of these Queens, we will send the American Bee Journal a year and the Queen—both for only $1.50. Address,

GEORGE W. YORK & CO., CHICAGO, ILL.

mence so early that the bees would be strong for the orange bloom. There can be no question but that the citrus bloom is rich with nectar, else it would not fill the entire atmosphere with such delightful perfume. I have not any doubt but the honey from this source would be of the very best flavor. This year not a little has been gathered. I believe that more attention to this winter bloom might be wisely given. The reason that we have it is that we bring Australian trees here, and as they home at bloom in our winter, they continue the habit after they are brought here. Our genial winters make the trees slow to change the date of blooming. A. J. COOK.

Los Angeles Co., Calif., May 18.

Bees Wintered Well

My bees were taken out of the cellar about 3 weeks ago, and I was very well pleased with the way they wintered. I put away 36 colonies and took out 35 in fine condition, the one that was dead (I find by referring to my record) being queenless last fall.

The colony in which I put a queen, secured last fall, stored 30 pounds of comb honey after that, and it is good and strong now. She is a fine one. WM. H. ROOT.

Wayne Co., Nebr., May 2.

Ideal Spring for the Bees

This has been an ideal spring for the bees. Since fruit-trees began to bloom there has not been a day but that the bees could work. They seem to have plenty of brood, but are not very strong in supplies, so that I will let them clean up a lot of second-class sections.

I am starting in with a spring count of 25 colonies. S. C. REARICK.

Wood Co., Ohio, May 9.

Langstroth on the Honey-Bee

Revised by Dadant—Latest Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.20, or club it with the American Bee Journal for one year—both for $2.00; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

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334 Dearborn Street, CHICAGO, ILL

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Open to both sexes from the beginning. Founded in 1846. Highest grade scholarship. First-class reputation. 25 instructors. Alumni and students occupying highest positions in Church and State. Expenses lower than other colleges of equal grade. Any young person with tact and energy can have an education. We invite correspondence. Send for catalog.

MOUNT UNION COLLEGE,
Alliance, Ohio.

Bee Supplies
Guaranteed Superiority!
Lowest Prices

We have been making Bee-Hives, Sections, etc., for over 20 years.

New..Illustrated..Catalog free; also sample copy of

The American Bee-Keeper
(Monthly, 50 cts. a Year.)

The best magazine for beginners. (It has been published by us regularly for 15 years.)

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THE W. T. FALCONER MFG. CO.,
JAMESTOWN, N. Y.

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When consigning, buying or selling, consult
R. A. BURNETT & CO.,
199 South Water St. Chicago, Ill.

SEND FOR OUR CATALOG OF BEE-SUPPLIES
We handle the best makes of Dovetailed Hives, one-piece Sections, Comb Foundation, and all other articles needed in the apiary, at lowest living prices. Bees and Queens for sale in season. A. W. SWAN & CO., Centralia, Kan.
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We Sell Root's Goods in Michigan
Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.
M. H. HUNT & SON,
Bell Branch, Wayne Co., Mich

STANDARD
Poultry AND....
Bee SUPPLIES

The best of everything for the poultry and bee-keeper.

Freight Rates from TOLEDO are the Lowest

BIG DISCOUNTS FOR EARLY ORDERS.

Our 60-page Illustrated Catalog is out. Send for one. IT'S FREE.

GRIGGS BROS.
521 Monroe Street,
TOLEDO, OHIO.

Headquarters for Bee-Supplies
ROOT'S GOODS
At Root's Factory Prices

COMPLETE STOCK FOR 1905 NOW ON HAND.
FREIGHT RATES FROM CINCINNATI ARE THE LOWEST,
ESPECIALLY FOR THE SOUTH, AS ALL FREIGHT NOW GOES THROUGH CINCINNATI.

Prompt Service is what I practice.
Satisfaction guaranteed.
You will save money buying from me. Catalog mailed Free.
Send for same.
Discounts allowed on early orders. Take advantage by ordering now.
Book orders for GOLDEN ITALIANS, RED CLOVERS and CARNIOLAN QUEENS.
☞ For prices refer to my Catalog.

C. H. W. WEBER CINCINNATI ...OHIO...
Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

Honey and Beeswax

Chicago, May 8.—With April about all the trade in comb honey ceases so far as this market is concerned; occasionally a case sells, but no lots, so that prices now are practically without change, pending the new crop. Extracted is exceedingly slow of sale; white ranges from 5½@7c, and amber 5½@6c, according to flavor, quality and package. Beeswax in active demand at 30c. R. A. Burnett & Co.

Cincinnati, May 8.—The demand for honey has increased quite a bit since our last quotation, which is due, probably, to the concessions made in prices to affect sales, as well as the awakening of the spring trade. We quote amber extracted honey in barrels at 4½@6½c, according to quality. White clover and fancy extracted honey at 6@7½c. Comb honey has seen its season. Beeswax 29c cash.
The Fred W. Muth Co.

Boston, May 23.—Our honey market continues very dull, with very little movement to be noted. We quote fancy white at 14c; No. 1, 12½@13c. Extracted, from 6@8c, according to quality. Blake, Scott & Lee.

Philadelphia, May 19.—The season is about over for the sale of comb honey, with so few sales that the market is not established enough to quote price. Extracted honey has met with some demand, and we quote as follows: White, 6@7c; amber, 5½@6c. Beeswax, 28c.
We are producers of honey and do not handle on commission. Wm. A. Selser.

New York, April 19.—There is no change in the condition of the honey market. Very little comb honey selling and prices ruling about the same as our last quotations. Extracted in fair demand only. Beeswax firm at 30c.
Hildreth & Segelken.

Kansas City, May 12.—The honey situation is a little stronger, and there is but little honey left in the hand of the dealers. Best honey bringing from $2.25 to $2.50 a case; amber at from 25@50c a case lower. Extracted, 4½@6c. Beeswax, 28c. C. C. Clemons & Co.

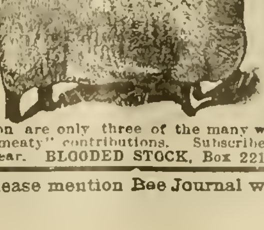
Cincinnati, O., May 18.—The large stock of comb honey yet offered with hardly any demand causes lower prices. I quote fancy water-white at 12c; other grades lower, in proportion. Extracted is in usual demand for this season of the year. We quote white clover 7@8c; amber in barrels at 5¼@5½c; in cans, 5¾@6 cents. Beeswax, 28c. C. H. W. Weber.

Albany, N.Y., Feb. 8.—Honey market dull this extreme cold weather, especially comb, which candies or granulates and cracks easily. We quote: Fancy white, 13@14c; No. 1, 12@13c; mixed, 10@11c; buckwheat, 10@11c. Extracted, better demand: Buckwheat, 6@6½c; white, 6@6½c. Buckwheat most in demand, as the Jewish people will have no other. Beeswax, 30@32c. H. R. Wright.

San Francisco, May 3.—White comb, 1-lb. sections, 11@12 cents; amber, 8@10c. Extracted-white, 5½@6 cents; light amber, 4@5c; amber, 3@3½c; dark amber, 2½@3c. Beeswax-good to choice, light, 29@30c; dark, 27@28c.
The steamer City of Peking, sailing Saturday last, took 85 cases for Belgium. Movement on local account is light. Buyers are holding off, anticipating arrivals of new crop at an early day.

WANTED
PURE BEESWAX and WHITE, GRAY or MIXED GEESE FEATHERS
Will buy in large quantities.
Send for prices quick.
De Witt Sisters
237 W. 46th Street, CHICAGO, ILL.

June Blooded Stock



that excellent stock paper, will explain how sheep-raising can be made highly profitable. The entire June number will be given up to Shropshire sheep. Chandler Bros. and Richard Gibson are only three of the many who will write "meaty" contributions. Subscribe now! 25c a year. BLOODED STOCK, Box 221, Oxford, Pa.

Please mention Bee Journal when writing

IS THE BEST TOO GOOD FOR YOU?

Lewis' goods are the best your money will buy and are worth every cent they cost you. Whether you receive them in the dead of winter or at the height of the honey-flow, or **when your bees are swarming**, they will fit accurately, admit of being put together quickly, and will be found to be made of the finest material. This saves you time; this saves you trouble; this saves you honey; and time, trouble and honey mean money to you. Your honey put up in good shape will bring higher prices, and the demand for it will be increased from year to year. This factory's reliable goods have started many a man on the road to success.

As is customary with all large concerns we have agencies or jobbers in different parts of the United States, where our goods are carried in stock. If you are located near any of those named below it will save you time and freight charges to send your order to them. Where the distance is not so great from Watertown to the agency, these jobbers sell the goods at our regular list prices.

ENGLAND
E. H. Taylor, Welwyn, Herts
CUBA
C. B. Stevens & Co., Havana
CALIFORNIA
Paul Bachert, Acton
California Lumber & Milling Co., San Francisco
COLORADO
R. C. Aikin, Loveland
Arkansas Valley Honey Producers' Association, Rocky Ford
Colorado Honey Producers' Association, Denver
Fruit Growers' Association, Grand Junct. Robert Halley, Montrose
ILLINOIS
Dadant & Sons, Hamilton
York Honey & Bee Supply Co., 141 and 143 Ontario St., Chicago
INDIANA
C. M. Scott & Co., Indianapolis

IOWA
Adam A. Clarke, Le Mars
Louis Hanssen's Sons, Davenport
MICHIGAN
A. G. Woodman, Grand Rapids
MINNESOTA
Wisconsin Lumber Co., Faribault
MISSOURI
E. E. Abbott, St. Joseph
OHIO
Fred W. Muth Co., Cincinnati
Norris & Anspach, Kenton
PENNSYLVANIA
Cleaver & Greene, Troy
TEXAS
Southwestern Bee Co., 438 West Houston St., San Antonio
UTAH
Fred Foulger & Sons, Ogden
WASHINGTON
Chas. H. Lilly Co., Seattle

Below is a fresh lot of Testimonials sent in to us unsolicited within the last 60 days:

Charlotte, N. C., April 13, 1905
G. B. Lewis Co., Watertown, Wis.
Gentlemen:—The goods have been received and I am greatly pleased with them. The hives are a model of perfection both as to material and workmanship. It is a pleasure to have material go together as yours does. Yours truly, E. W. Lyles.

Manton, Mich., April 14, 1905.
G. B. Lewis Co., Watertown, Wis.
Gentlemen:—Your goods are the best I ever received from any bee-house before. They all fit like the paper on the wall.
Yours truly, H. D. Salisbury.

G. B. Lewis Co., Watertown, Wis. McFall, Mo., April 17, 1905.
Gentlemen:—Don't you worry about our not handling your goods. We have used and sold your goods for 15 years and consider them the finest beeware made. Yours respectfully,
J. E. Enyart & Son.

G. B. Lewis Co., Watertown, Wis. Rome, Pa., May 22, 1905.
Gentlemen:—I think your sections the best I ever used.
Yours truly, W. J. Hill.

G. B. Lewis Co., Watertown, Wis. Oakland, Mo., May 22, 1905.
Gentlemen:—Your hives fit perfectly and your sections are superb.
Yours truly, Robert Wilson.

G. B. Lewis Co., Watertown, Wis. Fowler, Colo., May 20, 1905.
Gentlemen:—Yours of the 15th received and will say that I received your goods and think they are the best I ever saw.
Yours truly, W. C. Bevard.

G. B. Lewis Co., Watertown, Wis. Seattle, Wash, April 13, 1905.
Gentlemen:—We know we are always well pleased when we get a carload of Lewis' goods and that our retail and trade customers like to handle your supplies. You may not hear about this so often as people are much slower to express their approval than they are their disapproval. Yours truly, Lilly-Bogardus & Co.

G. B. LEWIS CO. Manufacturers of Bee-Supplies **Watertown, Wis.**

American Bee Journal

OUR TOIL DOTH SWEETEN OTHERS
WEEKLY—$1.00 A YEAR
Published by GEORGE W. YORK & CO., 334 Dearborn Street

45th Year CHICAGO, ILL., JUNE 8, 1905 No. 23

MASSACHUSETTS AGRICULTURAL COLLEGE.

WEEKLY

No. 1.—Baby Apiary of Wm. W. Murphy, of Linn Co., Mo.
No. 2.—Patch of Buckwheat in Bloom.

REAR QUEENS

It is not as difficult as many imagine. An instruction book and one of our Outfits, and you can supply your apiary and your neighbors at a profit. A good Queen IS the key to a good honey crop. See to it that ALL your colonies are queen-right.

ROOT QUEEN-REARING OUTFIT

In this outfit are embraced the best points of the best systems in use. It will give satisfaction to the amateur as well as the expert. The cell-cups are made of wood, wax-coated. No melted wax is used in their manipulation, as they are attached to the cell-stick by means of a small nail-point.

The nursery cage combines the features of nursery and introducing cages. By their use a queen can be released on the candy plan or caged in the hive as desired.

In connection with the outfit goes a booklet on queen-rearing—one which ought to put the veriest amateur on the high road to success. Outfit comprises 3 cell-bars with 50 waxed wooden cells, one frame cages, (20); one cell-forming stick; one set grafting-tools, and a book on queen-rearing, $4.50.

Wood cell-cup, with point for attaching to bar, 50c per 100; $4.00 per 1000.

Same, waxed, ready for use, 75c per 100; $6.00 per 1000;

Titoff wire nursery-cages, 15c each; $1.35 for 10; $12.50 per 100.

Frame for holding 20 cages, including cages, $3.00.

Cell-stick, each 10c; $1.00 per dozen.

Transferring-needle, double-ended and nickel-plated, 15c.

Jelly-spoon, nickel-plated, 15c.

We can supply, also, fine-pointed lace-scissors with extra large bows, for clumsy fingers, at 35c each.

⁂

Modern Queen-Rearing

A booklet of 34 pages, giving full description of methods used by the A. I. Root Company. You can not afford to do without this book if you rear queens. Price, 15c postpaid.

⁂

Doolittle on Queen-Rearing

The old standard. Price, $1 00 postpaid.

⁂

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SWARTHMORE QUEEN-REARING OUTFIT

Prices of Complete Outfits:

Outfit No. 1—Experimental, postpaid, $1.50

1 Cell-bar
16 Waxed flange-cups
1 Holding-frame
12 Transfer-cages

⁂

Outfit No. 2—Amateur, postpaid, $3.50

2 Cell-bars
35 Waxed flange-cups
1 Needle
1 Holding-frame
18 Transfer-cages
1 Cell-stick

⁂

Ourfit No 3—Professional, by freight or express, $7.50

2 Blank bars
3 Holding frames
1 Cage-pocket
1 Grafting-plug
10 Comp. mating-boxes
1 Bar-holder
1 Swarm-box with lid
2 Cell-bars
1 Incubating-cage
1 Grace cell-compressor
100 Flange-cups
2 Swarth. nursery-cages
24 Transfer-cages
1 Needle
1 Stick

⁂

Swarthmore Books

"INCREASE" tells how to form new colonies without breaking up working colonies, postpaid, 25 cents.

"BABY NUCLEI;" how to mate queens with a mere handful of bees, 50 cents.

'CELL-GETTING," 50 cents.

⁂

Prices of Separate Parts		Post extra
Bar-holder	$ .10	4 cents
Blank bar	.05	4 "
Bottle feeder	.10	5 "
Bulb filler and feeder	.75	8 "
Breeding-queen hive	1.00	
16-hole cell-bar	.10	2 "
Cage-pocket	.25	9 "
Flange-cups, unwaxed, 1c each; per 100	.75	9 "
Flange-cups, waxed, 2c each; per 100	1 75	14 "
Grace cell-compressor, each	1.75	14 "
Grafting-needle, each	.15	1 "
Grafting-plug, each	.10	1 "
Grafting-stick, each	.10	1 "
Holding-frame, each	.10	5 "
Incubating-cage, each	.35	7 "
Mating-boxes, complete, each 20c; 10	1.50	12 "
Nursery-cages, complete, waxed cell-cup	.35	5 "
Nursery-cages, no cups	.25	4 "
Swarm-box, with lid	1.00	
Swarm-box lid only	.25	
Trap-box	.50	
T stands, each	.10	6 "
Transfer-cages	.10	2 "

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MEDINA, OHIO

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ESTABLISHT IN 1861

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BEE JOURNAL

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2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

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(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

MEMBERSHIP DUES

1. Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.

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GEORGE W. YORK, Manager,
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Queen-Bee Free as a Premium

To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us ONE NEW subscription with $1.00 for the Bee Journal a year. Now is a good time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.

Editorial Notes and Comments

Short Stores—Warning to Beginners

As a matter of fact the warning is needed by many who are not beginners. A good many colonies will be lost after this paragraph appears in print, and by those who have not dreamed of danger. It seems to take a good many years of experience to gain an adequate idea of the amount of honey used up in rearing brood in the spring. A colony has a good supply of honey when overhauled in April or the first part of May, and the owner thinks it entirely unnecessary to give any further attention to the matter of stores. If he would look into the hives just before the harvest begins, he would be surprised at the bareness of the larders.

A critical time often comes just before time to put on supers, when the immense amount of brood makes heavy demands on the stores, and little or nothing is coming in from the fields. If stores give out entirely, it means not only the cessation of all egg-laying, but as well the destruction of all unsealed brood. In other words, it means the loss of eight or more days of the queen's work, and that at a time when such work counts at its highest value. Especially remember that starvation may come *after* the fields are white with clover, for there may be no nectar in the blossoms.

◆

The Glucose-Honey Story Again

Rene Bache, in the Saturday Evening Post for May 20, contributes an article on "The Whimsical Consumer: Color, Not Quality, is What He Seeks in Food." After saying, "Appearance counts for vastly more than taste in rendering any food product marketable," reference is made to bright red apples, large strawberries, brown-colored eggs, yellow-skinned chickens, etc., all of which, it is alleged, are preferred regardless of *taste* or *quality* by the consumer.

"As far as practicable, things should be big, uniform in size, shapely, and done up in convenient and showy packages," it is said. This may be the case in exceptional instances, but we can not believe that the housekeepers, purveyors, etc., of this country—those who perhaps buy nine tenths of all the eatables used—perfer appearance to quality and taste.

But the paragraph in Rene Bache's article that is of greatest interest to bee-keepers is the following:

> "Glucose, made of appropriate consistency, suitably colored, and containing pieces of genuine honey-comb, is bought by many people in preference to real comb honey. Honey is supposed to be light yellow, and, if darker, it finds a less ready sale. On the other hand, California comb honey is looked upon with suspicion in the East on account of its almost colorless appearance, the whiteness of the wax, and the perfect filling of all the cells. Purchasers frequently reject it on the supposition that it is machine-made, comb and all—the idea that comb honey is ingeniously counterfeited, and to some extent manufactured being, notwithstanding its absurdity, one of the most widespread of popular delusions."

We do not think that many people prefer a mixture of cheap glucose and pieces of honey-comb to "real comb honey." They may be inveigled into buying it through its sale being pushed by extensive advertising and otherwise, but never from a real preference if they can get first-class comb honey—the product of the bees. Talk about a combination of glucose and wax outranking the thick, delicious, well-ripened honey! It is ignorance of the genuine bee-product that prefers the glucose compound. Certainly no one who is familiar with real or best-quality honey—either in the comb or out of it—would prefer glucose, if in his right mind, or unless he has an unnatural, vitiated taste.

So "the idea that comb honey is ingeniously counterfeited," "machine-made," is still a "popular delusion." And the more beautiful the genuine article is in appearance, the more it is thought a counterfeit. Well, that's pretty rough on apicultural progress from bee-tree honey to that of tempting sections of virgin whiteness.

The next thing for bee-keepers to do is to displace the wrong idea that the public has of honey with the correct and true idea. Until that is done the finest product of the hive will be in disrepute among a large portion of our population. What a shame!

The Honey-Producers' League was organized to undertake the education of the public concerning honey. It's a big job, we know and will need the earnest co-operation of all bee-keepers and others who are interested in the production and sale of honey. But it can be done by a persistent, united effort.

◆

A Glowing Account of a Honey-Flow

Arthur Laing gives in the Canadian Bee Journal the following account of a honey-flow from logwood in the island of Jamaica that is enough to send a thrill to the heart of any genuine bee-keeper:

> I noticed unmistakable evidences of an almost universal bloom, and about 10 days later it came out in all its glory. It was truly a magnificent sight, and although the house was about 500 feet from the apiary, the roar of the bees passing to and fro was a sound to make glad the heart of any bee-keeper. I went down to the apiary one morning about 6 o'clock, and if I live to be 100 years old I never expect to see a more stirring scene in any apiary than I looked upon in that yard of 250 colonies. The bees seemed to be fairly wild with joy, and I must say it gave me a similar sensation to watch them. They kept up this pace for 4 days, which brought us up to a Saturday evening. I told my partner I should have to put on a lot of extra supers on the following Monday morning, but, alas! it rained that Saturday night, and next morning the logwood blossoms were as brown as though they had been burnt, and the flow was over. Six thousand pounds for the 4 days was the record.

But the thrill is likely to become a chill when later on he says:

> Prices we received ran from a small fraction below 2 cents per pound for dark to a small fraction below 3 cents per pound for the best, which was one of the finest samples on the island.

◆

Hushing Up Presence of Foul Brood

Mr. A. E. Hoshal is reported in the Canadian Bee Journal as saying:

> I have wondered why it is we desire to keep this thing covered up so thoroughly as we do. My bees had the disease a while ago, and I wouldn't like to be considered a criminal because my bees had it. It is no disgrace.

Mr. Hoshal is right. There is no more sense in hushing up a case of foul brood than there is in hushing up a case of small-pox. In both cases the welfare of others demands publicity.

◆

Send Questions in Time

Now and again some one sends a batch of questions to be answered in the American Bee Journal, with the curt request, "Answer in this week's Journal," when a very little knowledge of the publishing business would make the sender understand that compliance with such a request was an utter impossibility. Quite possibly the questions are such as have not arisen from any sudden emergency, but could have been asked a month sooner just as well as not.

It would be a real pleasure if every question could be answered in such manner that within 24 hours the answer should be received by the one who sent the question, and it is a painful feeling to know that sometimes when the best efforts have been made the answers are so late in being received as to cause disappointment. Although our postal system is a marvel of accuracy and dispatch, still it does sometimes happen that a letter is delayed, and in rare instances lost. There is also the possibility of loss in some cases before the letter reaches the post-office; and if not loss, delay. So there must be counted time, and sometimes overtime, for a letter to reach Chicago. Then it is a matter of time to get the letter to Dr. Miller, whose province is to answer questions. Just so far as it is possible to do so, he always answers such questions very promptly; but it must be remembered that he is a practical bee-keeper, and work in the apiary may be crowding so that he can not at once answer. After he has sent the answer to Chicago it takes time to get it into type and into press. Possibly the columns of the Journal are so crowded that a postponement of a week is inevitable.

If all these things are taken into consideration, it will be seen that the sender of a question can not reasonably expect to find his question answered in the next number of the paper.

If an answer is desired as speedily as possible, it is always well to send the question direct to Dr. Miller. The delay of a day or two from sending the question first to Chicago will sometimes make no difference as to the time it appears in print, and at other times it may make a delay of a week or two.

But be assured that it is the desire at this end of the line to make just as little delay as possible.

Miscellaneous News Items

Mr. Benton After Foreign Bees.—We have received the following from Miss Jessie E. Marks, who is an assistant in the section devoted to apiculture, of the Bureau of Entomology, in the Department of Agriculture at Washington:

> "The Apicultural Investigator of the United States Department of Agriculture, Mr. Frank Benton, is about to start on a tour of exploration in the interest of apiculture. The purpose of the trip will be to secure new and valuable types of honey-bees for testing (under control) in this country, more especially the giant bees of the East, Megapis dorsata (Apis dorsata), and also any honey-producing plants which might prove of value in this country, particularly such as would at the same time serve as forage crops.
>
> "He intends to go by way of England and across the continent to Constantinople, thence to the Caucasus, where he hopes to obtain a good supply of the gentle Caucasian queens; across the Caspian Sea to Bokhara, and from there southward over the long stretch of some 800 miles across Afghanistan (by caravan since there are no railroads in that region) to the Punjab in India, thence eastward through the northern part of Hindustan to Calcutta, whence the route will be by steamer via Singapore to Manila."

We trust Mr. Benton will keep the bee-papers of America informed concerning his foreign investigations, so that they in turn can pass the information on to their readers, who will be greatly interested in the proposed trip and its results.

◆

Invention of the Movable-Frame Hive.—It is a pleasure to have the following explanation from one who is so thoroughly familiar with bee-keeping in Germany, and who stands as authority on both sides the ocean:

> To the notice on page 340, I have to make a few remarks. This matter has been discussed very often, nevertheless some mistakes remain to be corrected. The different opinions can easily be explained if we distinguish movable *frames* and movable *combs*.
>
> Nobody in Germany claims that Dzierzon invented a movable-frame hive, even the movable comb attached to a bar was known long before him, among others Della Rocca using this bar. But it is claimed in Germany that Dzierzon was the first who made such bar-hives fitted for practical bee-keeping, because his hive opened on the side, consequently the combs could be cut off from the ends more easily than in the top-opening hives used before him. Certainly his hive caused remarkable progress in practical bee-keeping in Germany.
>
> Baron Berlepsch is considered as the inventor of the movable frame in Germany. He invented his frame with the bee-space all around it, and very similar to the Hoffman frame (lately recommended in the United States), at the same time that Langstroth invented his movable-frame hive. Certainly both inventions were made public the same year, and not one of these inventors knew anything of the other. The two hives are so much different that nobody can doubt that each invention was made independently of the other.
>
> The Berlepsch hive is still in general use in Germany, like the Langstroth hive in America. Of course both are considerably modified at present.
>
> Certainly we should perceive and honor the merits of all these men, just in the way they are entitled. L. STACHELHAUSEN.
>
> Bexar Co., Tex.

◆

The Apiary and Buckwheat Pictures on the first page are described by Mr. Murphy as follows:

> I send two pictures, one is a patch of buckwheat in bloom, and the other my apiary. I was a beginner in 1904, and had only 4 colonies, which I united this spring to 3.
>
> The buckwheat pictured is the silverhull, and I sowed it broadcast June 1, 1904. It bloomed for 25 days, and I let it stand and fall off by the midsummer rains, when it sprouted up again and bloomed, with a good flow of honey till frost, which was late last fall. Now this spring there is no volunteer buckwheat to bother the corn crop.
>
> Last summer colony No. 1 gave me 70 full sections of honey, and 14 partly filled sections, besides about 25 pounds in the brood-chamber. The honey was fine and rich.
>
> The two boys in the picture are my Damon and Loyal, who are not afraid of bees and never get a sting. They love to watch and study them. WM. W. MURPHY.

◆

Good Reports—National Convention—General Manager France, writing us May 27, had this to say:

> Nearly every State reports good honey prospects.
>
> The Texas Committee on the next National convention at San Antonio, has planned a free banquet for all members who attend, the food to be composed wholly of Mexican dishes; also a 4-hour trolley ride is arranged. There will be a big Fair in San Antonio, Oct. 21 to Nov. 1, so they have asked that our meeting be held between those dates. One day at the Fair will be "Bee-Keepers' Day." Texas certainly will do her part.
>
> N. E. FRANCE.

We don't know about those red-peppery "Mexican dishes." They will likely be pretty "hot stuff," and so A. I. Root and Dr. Miller will have to go "tenderfootedly" down there even when eating "with their fingers." But perhaps they will have their rubber bee-gloves on to protect them when handling the fiery viands. But what about the linings of their stomachs?

May be those two "boys" would better stay at home, or else take their "best girls" along to look after them, and help defend them from the internal as well as external dangers that those lively Texans seem to be preparing for their guests!

The rest of us can take along a supply of "Dr. Gandy's Famous Catnip Honey."

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Honey-Paste for Chapped Hands

Honey-paste for chapped hands is made by combining the white of an egg, one teaspoonful of glycerin, one ounce of honey and ground barley.—Mme. Qui Vive, in Chicago Record-Herald.

Honey-Muffins

Sift together 2 cupfuls of flour, ½ a teaspoonful of salt, and 2 teaspoonfuls baking powder. Beat the yolks of 2 eggs very light, add 2 level tablespoonfuls butter (melted), and ¾ of a cup of milk and same of extracted honey. Stir the liquid into the flour, beating to a smooth batter. Beat the whites of the eggs to a stiff froth and fold them in. Bake in muffin-rings placed on a griddle.—Grand Rapids (Mich.) Post.

Hive-Making at Home Explained

As to whether or not it will pay to manufacture one's own hives depends altogether upon how one is situated and upon what kind of machinery he has at hand. Certainly it will not pay to put them up without some kind of special machinery, for not only is labor worth too much, but the average bee-keeper, unless an accomplished workman besides, would be unable to make corners, frames, and other parts to compare with those cut out in factories equipped for the purpose. But such apparatus as is needed in hive-making is not expensive nor difficult to run, and where a bee-keeper has the necessary time to spare, with upwards of 30 colonies to provide for, it would probably pay him well to invest a little in hive-cutting machinery.

Although we have kept bees for a number of years, averaging 50 colonies to twice that number, we have never had a factory-made hive on the premises. Nor would I exchange the ones we are using for any offered by the best bee-supply house in existence.

Our first start of bees was bought from an old man who made his own hives much as we make ours now. With the 3 colonies bought we also bought a half-dozen hives in the flat. These were sufficient for the first season, and by the time the next came around we were prepared to put up hives for ourselves and our neighbor bee-keepers. The machinery I will endeavor to describe, also give first cost as far as money invested is concerned.

Some kind of power was of course the first essential. My husband fortunately owned a small-sized horse-power, which he used for sawing stove-wood, and other kinds of light work on the farm. These, at that time, could be secured quite cheaply of thresher-men, who had discarded them for the more popular steam outfit. This one has been re-framed, I believe; but this did not represent any considerable expense.

Having the power and a jack with belt, the only thing necessary to buy was the cutting machinery. Two 7-inch circular saws, one a cut-off and the other a rip-saw, were ordered through a local hardware merchant. These cost in the neighborhood of $3, the exact amount I have forgotten now. Although 7-inch saws will do quite nicely, 8-inch we have since found would be much better. A little framing material and suitable lumber for table and carriage was all that was bought besides.

Carpenter tools abound here, the master being what may well be called a "handy man." During the winter, when farm work was not pressing, the wood parts were made and put together. An ingenious contrivance, which may be adjusted instantly to any measurements, insures square ends and perfect-fitting joints. Square and saws (other than those belonging to the machine) are never needed. Any kind, size, and make of hive, with any style of frame, can be cut accurately, rapidly, and with comparative ease. Two horses are generally used, though, perhaps, one would be sufficient; at any rate for a short run.

This machine does not cut dovetailed corners, of course, but instead we make what are called "halved corners." These are nailed from both sides, and are really all that could be desired. We have never had one spread or warp away from the joint. For our own hives we use the V-shaped top-bar and self-spacing frames. These the machine cuts as readily as the old-fashioned thick top-bars. Even hand-holes are cut out when so wanted. Supers of all kinds are as easily made as hives. There is, in fact, no wood article except sections, which we buy from bee-supply houses.

One man with two horses can easily cut out and pack 20 to 30 hives, with frames and supers, in an ordinary working day, while two men—one at the machine and one to move and pack away the parts as cut—could turn out nearly twice that number.

Shipping-cases, poultry-crates, and numerous other such things are cut out and made at home. Our neighbors never think of buying hives from bee-supply houses, as we can furnish them as needed, and at even lower prices. This trade, however, we do not solicit, furnishing them only as an accommodation.

As to the cost of hives made thus, it is evident that this is represented altogether by cost of lumber. For hive-bodies and covers it is usually necessary to buy high-priced lumber, costing perhaps from $40 to $50 per thousand. For bottom-boards, made with inclined alighting-board, narrower and cheaper lumber can be used. Supers can also be made of narrower lumber, though of quality equal to the hive-bodies. Frames are largely cut from short pieces and waste strips left from other parts of the hives. Only best quality lumber is used for them, whether waste pieces or not. Common 1½-story 8-frame Langstroth hives will usually cost from 65 to 75 cents each for material, covers and bottoms included, of course. But this is for best quality of lumber at ordinary retail prices. Nailing and painting costs perhaps 10 cents more per hive. Whether or not it pays, any one can decide for himself, but we shall continue to make what hives are required for use in our own apiary, at any rate.

To any one desiring to put in such machinery as that described above, I would say that many practical hints may be obtained from the "A B C of Bee Culture." With this book at hand any man handy with carpenter tools should be able to build a very satisfactory hive-cutting apparatus. I would say, however, that ours is somewhat more complicated and of greater capacity than the small machines described there.

Perhaps some may like to know where this machine is used and kept when not in use. Like all other farmers in this vicinity, we have tobacco-curing sheds on the farm, and the saw parts are both used and stored in one of these. The power is set up outside for use there, and the rod driving the belt is run through or under one of the small side doors provided for in curing the tobacco. Any good-sized work-shop would accommodate the saws and frame parts without difficulty.

(Mrs.) Millie Honaker.

Vernon Co., Wis.

[The "A B C of Bee Culture" can be had for $1.20, postpaid, or for $2.00 the book will be sent with the American Bee Journal one year. Address all orders to the American Bee Journal, 334 Dearborn St., Chicago, Ill.—Editor.]

Contributed Special Articles

"The Cloistering Hive and the Cloistral Method"

BY C. P. DADANT

THE above is the title of a book which is just now attracting the attention of the bee-keepers in France. The authors, J. M. and J. B. Gouttefangeas, here describe their method with a number of cuts. The book is in the French language.

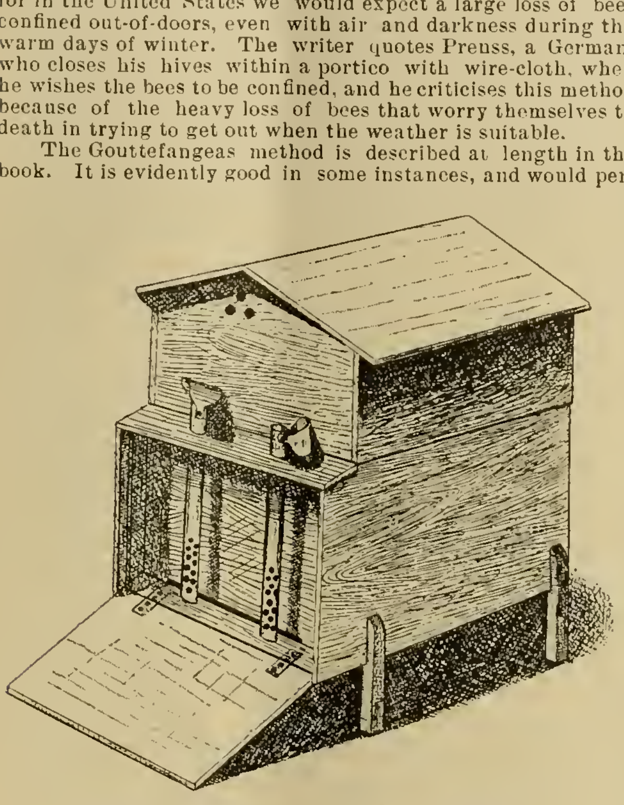
Cloisters, convents, monasteries, hermitages, belong mainly to the Old World. Here they are. It is therefore not astonishing that the ideas emitted originate in the Old World, and that this title sounds strange to our ears. One of the authors describes his home, where he has practiced the method which his book recommends:

> "The Hermitage is an antique monastery perched at 1100 meters of altitude [3600 feet], in the midst of a large forest of beautiful pine trees. The summers are charming here, but the winters are long and rigorous, nothing can be heard but the noise of the wind among the trees and sometimes the shrill piping of the titmouse, but during the night there are powerful screams, well harmonized with the savage nature of this rustic spot, the piercing voice of the owls which seek for one another or hunt for their prey. They have their nest just above my room in the mansard of a spacious attic, and I have given them full permission to establish there their *graceful* family. They are my friends; they are also the friends of my bees; they destroy more rodents than all the cats of the canton, and the rodents are the enemies of the bees; the enemies of my enemies are my friends."

The cloistering hive is provided with an apparatus for closing it up while at the same time letting a current of air pass freely through without admitting light. This apparatus is composed of pipes in the shape of chimneys or flues pierced with holes and placed in an ante-chamber or portico, where the bees congregate when there is any desire on their part of taking wing.

In Auvergne, the home of the authors, it is customary among the old-style bee-keepers to close up the hives with cow-dung in the fall, leaving for air only three or four hollow hemp-stalks. The bees then remain cloistered four or five months. But when a warm day comes they are restless, and it is to avoid this restlessness, by excluding light, that the authors have devised the method in question. Evidently the temperature of those regions differs from that of our climate, for in the United States we would expect a large loss of bees confined out-of-doors, even with air and darkness during the warm days of winter. The writer quotes Preuss, a German, who closes his hives within a portico with wire-cloth, when he wishes the bees to be confined, and he criticises this method because of the heavy loss of bees that worry themselves to death in trying to get out when the weather is suitable.

The Gouttefangeas method is described at length in the book. It is evidently good in some instances, and would perhaps prove quite profitable here in backward springs to prevent spring dwindling when the bees go out, in spite of the cold, after pollen or water. In connection with this, they recommend a watering-trough to be used with the hive at the time when the bees need water for breeding.



The Cloistering Hive with Two Air-Tubes. A Dadant-Blatt Hive. The Alighting Board is hinged to close the Portico when wanted.

They advise the use of this implement mainly during winter to prevent the bees from flying out when there is snow on the ground. It may do very well in a country where the cold of winter is not very severe and does not compel the bees to consume much stores, and where the warm days are not sufficiently warm to make it advisable for the bees to be allowed out. But in our extremely cold climate, with an occasional day when the sun shines warm enough to disturb the bees through the walls of their hive, we have always found it better to allow them to take a flight, even at the risk of losing many bees outside, than to keep the colony confined to the hive in the dark.

They use this cloister in the fall, when the bees go out without purpose, or only to seek for flowers which can not be found. They hold, with some reason, that a colony often becomes depopulated by numerous late flights in cool, fall days. They even close the hives in summer when there is nothing in the field. But their summer is not like ours, for the hottest temperature upon which they reckon is 77 degrees, and they even hesitate as to the advisability of closing the hives when the temperature exceeds 18 degrees Centigrade, which is equivalent to 66 Fahrenheit. There are many winter days in this latitude when the temperature rises above that point.

They use the cloister method when a hive is robbed, or when they want to feed the bees, especially weak colonies. They also recommend it in making artificial swarms by the addition of bees to combs of brood for strengthening colonies, for making nuclei, for transporting colonies and holding them a few days captive that they may the better remember their new location and forget the old one, when released.

On the whole, the book has many good ideas, and is to be considered as the exponent of a system which would be practical at high altitudes or in very cool climates when the heat of the sun is never so intense that it may make the bees uncomfortable in confinement. Of course, the closing in of these active insects is contrary to their nature, but this is only another instance of the change of conditions brought about by man. If it proves necessary to put the bees into the cellar, or to confine them, we need not be held back by anything but the actual results after trial.

Hancock Co., Ill.

⁂

Mortality Among Bees—Tree-Planting

BY PROF. A. J. COOK

Mr. G. F. MERRIAM, of San Diego Co., Calif., sends me a letter from J. M. March, wherein is described an apparently new bee disease. Both Mr. Merriam and Mr. March are very much interested in the matter, and desire my opinion regarding the cause of this rapid taking off of the bees. The mortality was in February, and seemed to be among the old bees. These would die in the hive, would tumble over just outside, and often would fly to the field never to return. The result was the loss of many colonies. Mr. March inclines to the opinion that this is caused by collecting poisonous nectar, and Mr. Merriam wishes my opinion regarding this explanation.

I very much doubt if bees ever gather poisonous nectar from the flowers. True, I remember the old account of Herodotus and the soldier, and I am aware of the reputation of jasmine and some other honey even in modern times. Is it not true that these accounts of poisonous honey, like witchcraft and ghosts, grow beautifully less as we know more? I have studied the matter a good deal, and I greatly question if there is any such thing as poisonous honey gathered from flowers. I have so often given the arguments in the American Bee Journal that I will not repeat them here. Suffice it to say that if poisonous honey were gathered it woulo be more common, and more a matter of observation. As honey often makes people sick, it is easy to explain the origin of such stories witont recourse to any theory of poison.

I should the rather think that poison had been sprayed on trees when in blossom, an inexcusable and indefensible trick in this day of better knowledge, except that at so early a date (February) we can hardly see why such spraying would be done, except with malicious intent, which is not at all supposable in this case. I am sure of cases where spraying fruit-trees with Paris-green while in blossom has not only brought on great mortality among the mature or imago bees, but has also resulted in great mortality among the brood or larvæ.

There is still another explanation which I think is the correct one in regard to Mr. March's bees. Last year was one of exceeding drouth in Southern California. As a result the bees gathered little and often no honey at all in many localities. Where Mr. Merriam lives, in San Diego County, is one of the driest in this section. It is easy to believe that last season Mr. March's bees went the season through without gathering any honey at all. We all know what occurs in the hive when bees get no honey for long periods of time. The queen ceases laying and brood-rearing ceases. Thus it is easy to believe that there were no young bees produced in these hives in all the long months of 1904. Yet the old bees would go right on dying, as bees live not over long, even at the best. We thus understand how it would be that these bees should disappear simply by natural law. They simply die of old age.

In case my explanation is the correct one, the remedy is not far to seek. Stimulative feeding at times of honey-dearth would not only give sufficient supplies to the bees, which they are quite likely to need at such times, but will also incite to brood-rearing, and thus this mortality would be avoided. What makes me more inclined to believe that this explanation is the correct one, is the fact that with the rains, the bloom, the nectar, and the honey of this spring, the mortality has ceased, and the bees, which a short time back were rapidly disappearing, are now decidedly on the up grade, and the colonies promise rich returns for the coming season.

THE ACACIAS.

Among the many rich treasures that California has received from Australia and the contiguous islands, are the beautiful acacias. These are now (April 24) in full bloom on our college campus and in the private yards of our beautiful village. As I have collected sprigs for purposes of identification, I have been interested in the loud hum of countless bees visiting the trees not only for nectar but for pollen. While the bees very likely get some nectar from the flowers themselves, which surely furnish great quantities of pollen, I think they get far more from extra-floral glands. Would any one say that this is not floral honey? We thus see the absurdity of giving any definition of honey other than "sweets stored by bees," not specifying the source.

I wish in this article to commend acacias for general planting. Southern California is already one of the most beautiful parts of the world. There is a general feeling at present prompting to general roadside planting. Claremont. Pomona, and San Dimas, all neighboring towns with a common telephone, have recently engaged in very extensive roadside tree-planting. It is worthy of remark that each of these places has a vigorous farmers' club. Communities with such clubs are not usually asleep to their own best interests. One of the trees that these communities have planted quite extensively is the black acacia. The following are some of the reasons why it pays to plant acacias, not only along the roadside but in our private grounds:

In the first place let me say, these trees come from an arid region. Thus they are used to drouth, reach far down into the ground for water, and so are fortified against neglect. If we plant acacia then we may be quite sure that our trees will live, and with a dry season or neglect to irrigate we will not be disappointed with a lot of dead or sickly trees throwing reproaches at us.

Another gain in planting these trees comes from the fact of their exceeding beauty. I don't know of any trees that are more attractive. With many of them the foliage is as delicate and graceful as that of the fern or that of the sensitive-plant; and when there is mingled with this wondrously elegant foliage the rich profusion of bloom that these trees fling out for us, we have before us truly objects that are a joy forever. We often desire in our yards shrubs or small trees that are beautiful.

To any who may be wishing for such, I would recommend Acacia cultriformis, A. pulchella and A. pendula. The first of these is as beautiful in foliage as in flower, and when the two are combined people coming suddenly upon the plants are forced to pause in admiration. Pulchella is true to its name, while the nodding habit of pendula adds another feature to its grace and elegance.

If one wishes larger trees, then I would recommend the willow like A. nereifolia, usually known as A. floribunda; or, most beautiful of all, A. baileyana, which is incomparable in its foliage among the acacias, and when in bloom becomes simply unparalleled in its beauty. I really think this is "the noblest Roman of them all." For roadside planting, probably the Australian blackwood, or black acacia, A. melanoxylon, is to be preferred, as it is a very rapid grower, fine in form, and gives a beautiful avenue effect. The blossom, however, is white instead of yellow, rather small, and so quite inconspicuous.

Before closing let me suggest that in roadside tree-planting we do not mix trees, but plant all of one kind. This gives a much finer effect, and is recommended by all our best landscape gardeners.

CALIFORNIA HONEY-TREES.

From what I have written above it needs hardly be said that the acacias are worthy a place in our planting because of their value as honey-trees. The eucalypts are also to be selected for this same reason. Indeed, the eucalypts have all the virtues that belong to the acacias. Like the acacias, they have been brought from the southern hemisphere to the northern, hence there is a tendency to change their time of bloom. Consequently, we have in these, as in the acacias, trees blossoming at every season of the year.

Another tree worthy of consideration both for its elegance and as a honey-tree, is the incomparable pepper. I know of no tree the world over which has more to recommend it.

Los Angeles Co., Calif.

State Inspection of Apiaries in Illinois

[Read at the Illinois State Convention Nov. 15, 16, 1904]

No more interesting occupation can be imagined than that of an inspector of apiaries. Early in the summer of 1904 the writer got his commission from Hon. J. Q. Smith, Inspector of Apiaries for Illinois. Soon after he started on his rounds among the Cook County bee-keepers.

Quite a number were visited who kept bees in box-hives, and never saw the interior of a brood-nest from one year's end to another. Some of these said their bees had nearly all died out, that they had not done well, etc. Of course in such cases it might be necessary to break up a colony or two of the weakest live ones, to make a thorough examination, transferring the bees and combs to another hive. In the cases that I have in mind the parties were somewhat ignorant of our language and customs, and were entirely unwilling to have the hives touched, almost refusing to let me go into the back yard to have a look at the outside of the hives. Of course the colonies might be diseased, and the losses might have been caused by disease, but under the law as it stands, an inspector has no power to touch a hive for any purpose, without the consent of the owner, and the disease continues to spread in all directions from an infected apiary. By all means should the legislature be asked to give a drastic law, similar to the Wisconsin act. Otherwise it seems like wasting the money.

In my work of inspection I pass the home and apiary of a near neighbor and friend. He is an old-timer, having kept from 100 colonies up and down for 20 years or so. I never supposed his bees had the disease until one day I made him a formal call, asking him how his bees were. His answer, "They have got it," expressed the situation. We spent some time that day, and another day I returned and we examined nearly the whole apiary, and found 4 out of 5 colonies had foul brood. His loss will be over $100.00 this season, by the disease. I questioned him as to where they could have gotten the infection. He named a party a mile away as the likely one. He said further that he had allowed the bees to clean out a honey-barrel that had been shipped in from Wisconsin. I visited the party named and found only the lady of the house at home. I told my errand. We went out to the colonies, and found 3 dead and only 1 alive. The live one I opened without smoke, and found a few bees on three frames and brood on two frames. They were in the last stage of foul brood. Now, I should have had the power to burn up the whole outfit, except the hives, on the spot. I urgently requested the lady of the house to have them burned up at once, and she promised to have it done. My time was too short, and the ground too large to get over it the second time, so I don't know whether it was done or not.

Now here is the condition that confronts us: The big State of Illinois has 102 counties, with about 350 apiaries to the county. Suppose an inspector can reach 5 apiaries in a day, it would take 70 days to cover one county effectually. This does not seem far out of the way when you remember that second and third calls must be made on a certain number of them. Seventy days to a county, 102 counties—7140 days' time to inspect the State. Suppose each deputy could put in 6 months—May, June, July, August, September, October, and put in 25 days in each month, which would make 150 days for each inspector. It would take about 48 inspectors to cover the ground. Allow $5.50 a day for each inspector—$4.00 and $1.50 expenses. That makes $39,270 as the sum needed to cover Illinois properly in one season. The moral of this is that we must ask the legislature for $5,000 at the very least.

In order to get the money we must show them what was done with the money already given us the past two years. We must *make a report* of work done and money expended. We must show why we need a new law, and why we need more money. This report must be in proper form and addressed to the Governor and the legislative bodies. It must not be too voluminous, for they will not read and understand it if too many words are used. It seems fairly certain that we can get the largely-increased appropriation if the proper means are used. The Hon. H. W. Austin has consented to introduce our bill. You may remember that we would have had no law in 1903 without his aid. He recognizes the fact that even $5,000 is an insignificant sum to cover the great State of Illinois.

It seems to be a fact that the aid of the Chicago-Northwestern Bee-Keepers' Association is necessary to the success of this plan. Let us suggest that a clause be incorporated in the new law to give the control of the fund to a joint board composed of the executive committees of both associations equally. It seems as if under such an administration the largest constituency could be reached, and the greatest good done to the greatest number. The Chicago-Northwestern is looking forward to great things. Two thousand invitations have been mailed for the coming convention at Chicago, Nov. 30 and Dec. 1, 1904. If these two of the best associations in America join hands, there will be no limit to their usefulness.

Herman F. Moore,
Secretary of Chicago-Northwestern and Member of Illinois State.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

NO ADULTERATED COMB FOUNDATION AMONG AMERICANS.

It is not that all Europeans are rogues and all Americans honest, that we don't have adulterated foundation in this country. Climate and Conscience trot in double harness for us as they do not elsewhere. In our extreme climate impure foundation is nearly *sure* to break down; while in cool climes the break-down is only occasional—not frequent enough to stop the use of the article. We have rogues, and they can simulate honesty and innocence *ad libitum;* but they can't keep people from abandoning the use of an article that absolutely won't work. Page 324.

WISCONSIN APIARY INSPECTOR'S BLANK.

Did you suitably thank N. E. France for that "Subscriber for" in the inspection blank? It appears to be suggestive enough to do lots of good without being quite iterative or impertinent enough to be insulting. This latter contingency is sometimes sadly forgotten in human affairs. I'm well acquainted with the superintendent of a little country Sunday-school who feels insulted by the blanks he is required to make out—with iterative "none—no—no—no." A closing-up line reading, "Nothing but heathen, moss-backs and savages out here" would almost be appropriate. Page 324.

FREIGHT-RATE ON HONEY IN JACKETED CANS.

The importance of getting juster freight-rates for extracted honey in jacketed cans is considerable, even if it applies to but one classification region. Easier to make other regions follow suit then. Something more than six lines of fine print might very properly be given to this success of Mr. N. E. France. Very plain that Mr. F. does not make the incubating hen his sole model of performance. Let us remember that a few appreciative words now and then are excellent to make a servant who does well keep on doing well. For costing little and accomplishing much they take first prize. And they bless him who gives them almost as much as him who receives them—keep him from growing to be a bear in this zoological world. Page 324.

TARIFF ON CUBAN HONEY.

With all allowances made, the present actual tariff on Cuban comb honey is a cent and a quarter a pound, it seems. Not heavy enough to be prohibitive or seriously repressive. By common repute there's going to be *some time* a general readjustment of the tariff; but our folks want a rise, and the popular idea is a general reduction. Driving from Derby to London when London drives out to Derby to see the great race is said to be a trifle trying. Page 324.

KNOWING THE PURPOSE OF ONE'S EXISTENCE.

So you concluded the Root Company know what they are there for without being told! Well, if the bell knows what it's there for without being told, it should still be tolled at proper times. Won't hurt us perhaps to say that *on the whole* they are there because they best deserve to be there. And in this world of God's, *continuing* to deserve leadership is an immensely important item—seeing that we have Scripture to inform us that the crown does not endure to all generations. Page 324.

POLLEN OF VARIOUS HUES.

The pollen pellets which bees bear on their legs take a wide range of color; yet they rather rarely verge on the greens, and still more rarely on the blues. Some of the California gilias, according to Prof. Cook, yield a blue pollen. Page 325.

BEES DON'T STING FRUIT.

Lots of us have been living with bees for a good share of our lives, and I venture the assertion that none of us has ever seen anything in their behavior that would lead one to expect them to sting a grape or peach. Not like them. And that sort of consideration counts heavily. The dog might make faces at the looking-glass, but he is not going to do it. The captured rabbit might defend himself by biting (and we greatly wonder why he does not), but somehow he never does. The great carnivora of the cat tribe might, when tamed, hunt under a master like the dog, but they just *won't.* Domestic pussy pretty nearly ditto—she must boss her own hunting or there'll be none. Similarly it's not in the nature of bees to sting things for mechanical purposes. Dander must be up or no sting. Or let us get at the slander from a different direction. Suppose bees did sting grapes. Those who charge this do not consider what an exceedingly fine shaft the sting is. No insect would notice so infinitesimal a puncture, and no juice would exude—unless I am very greatly mistaken. In fact, we may offer our own hides in evidence. An ordinary sting does not let out the blood. But when it causes a spasm of the tissues, making the spot to assume a different color, and to draw into an entirely new shape, then a visible dot or color of blood is *forced* out. But fruits do not have the kind of life that *can* get up a spasm. Page 328.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to Dr. C. C. Miller, Marengo, Ill.
☞ Dr. Miller does *not* auswer Questions by mail.

California Redwood—Bee-Sting Remedies

1. I have a chance to get some hives made of California redwood. It is used for making incubators in this town. They say it will not take water, ants or moths will not work in it, and it will stand painting. Would the honey taste of it, or would the bees want to live in hives with that odor? Some say to wash with salt water or peach leaves. I can get hives made from this very cheap, although redwood is high-priced. Have you had any experience in this matter?

2. What is the best remedy for a bee-sting, either for a person on whom the sting swells or one that it doesn't? It does not swell on me. I have heard that a sting will always swell up on a healthy person. Is that true?

Nebraska.

Answers.—1. California redwood has been successfully used for bee-hives, and you need not fear its effect on the honey, even without salt or peach leaves, which probably have no effect. But you will hardly find it proof against ants and moths.

2. To give all the remedies that have been offered for bee-stings would occupy pages. Perhaps as good as any other remedy is a plaster of mud. Most bee-keepers of experience seem to think that no remedy does much good; the only thing they do being to get the sting out as soon as possible. Don't pull out the sting by grasping it between thumb and finger, for that helps to squeeze more poison into the wound; but scrape it out with the finger-nail, or else, if it is in the hand, by striking the hand hard on the thigh with a sort of sliding motion which wipes out the sting. A sting will swell on a healthy person in nearly every case if the person is not used to it, and perhaps a little worse on an unhealthy person; but after being stung often one generally becomes to an extent immune, so there is little or no swelling.

Putting on Supers

Is it better to put on supers before swarming-time or at once? Michigan.

Answer.—In most localities it is better to put on supers before swarming begins. As you are probably in a white-clover region, you will do well to put on supers a week or 10 days after the *very first* clover blossom is seen. Better put on supers too early than too late.

Clipping Off Queens' Legs

In clipping queens, do you not sometimes clip off a foot? If you should accidentally do so, what effect would it have on the queen? Would she die, stop laying, or be superseded by the bees? Iowa.

Answer.—I think I was never more than once so careless as to cut off a leg. A queen with 5 legs will do good work laying, as I have had several born lacking one leg.

Management for Increase

I bought a 3-frame nucleus May 12, and put it in an 8-frame hive with 5 frames of empty combs. It has been said that properly managed this could be increased to 4 or 5 full colonies by fall. How ought it to be managed in order to accomplish this result? I have been feeding syrup, and the bees have taken considerable of it into the combs.

Missouri.

Answer.—If any one tells you that you can increase that 3-frame nucleus to 4 or 5 colonies by fall, tell him you don't believe it. That's a feat for a veteran of long experience under the most favorable circumstances. I wouldn't dare to promise I would do it. To make the greatest increase, you need familiarity with basic principles which you will get from a book of instructions on bee-keeping. This department is intended to supplement such a book, not to take its place, for which enough room could not be allowed. After studying up the book, if anything is not clear, I shall be glad to help clear up all I can in this department.

Bees Gnawing Foundation in Sections

What is the cause of bees cutting foundation out of the sections?

I am a beginner, having started with a swarm which came to me July 6, 1903. I hived it in a box, and put it in an orchard, where I keep it. In the spring of 1904 a neighbor helped me to put the bees in a hive, and I secured one swarm and 30 sections of honey from them that season. I caught 3 runaway swarms, but lost 2 of them in the winter.

I used inch starters in the sections, but this spring I thought I would use full sheets, and I notice that the bees are cutting out some of them. I can not imagine what makes them do it, unless I did not fasten them in right. I fastened the foundation at both ends. Did I do right, or ought the bottom to have been left loose? IOWA.

ANSWER.—The foundation should not be fastened at the bottom, but should be about $\frac{1}{4}$ inch short of reaching the bottom (unless you use also a small bottom-starter), otherwise it is likely to sag and buckle. But that was not the reason the bees gnawed it. They probably gnawed the foundation because you gave it to them entirely too early, when they have no use for it. In your locality sections should not be given till after clover is in bloom. A book of instruction would be a paying investment.

Colony With a Poor Queen

I have a colony of bees, hived about July 1 last year, which is not doing very well. I found a queen in the hive to-day, but there were hardly any eggs and only a small quantity of brood in 4 or 5 frames. The queen is very small compared to other queens in the bee-yard. What ought I to do with this colony? IOWA.

ANSWER.—If you had said the small amount of brood and eggs was all in one frame, there might be reason for believing that the queen was all right in a very weak colony; but when you say there is brood scattered in 5 frames, that condemns the queen. The only thing to do is to destroy the queen and give the colony another queen or a sealed queen-cell, or else allow the bees to rear a queen, giving them unsealed brood from other colonies. All this on the supposition that the colony is strong enough to be worth saving, which is indicated by the brood scattered in 5 frames.

Corn Honey

I am sending you a sample of corn honey—a thing not often to be had. Three colonies brought in about 100 pounds last season, but the other bees did not get beyond the pollen contained in the tassels. Everything must be just so for corn honey—plenty of rain during the night, and temperature from about 70 to 80 degrees during the day. PENNSYLVANIA.

ANSWER.—Thanks for the sample. It is granulated extracted, of not very heavy body, rather light amber in color, and of rather pleasant flavor.

Space Between Bottom-Board and Brood-Frames

How much space can be left from the bottom-board to the bottom of the brood-frames in summer or during the honey-flow, without danger of the space being filled with comb? MISSOURI.

ANSWER.—I don't know just how much. Probably as much as $\frac{3}{4}$ of an inch with narrow bottom-bars. and perhaps a full inch with bottom-bars $1\frac{1}{8}$ wide.

Wintering Bees—Early Drones—Swarming

My success in wintering bees in a cellar for the first time the past winter prompts me to relate it briefly, so you may form your own conclusions as to whether it was ventilation or what that gave me my success.

About Nov. 10, 1904, I was passing through the bee-yard and found a colony with plenty of bees, but almost destitute of stores. I put an empty super on, filled a pan with very thick syrup from granulated sugar, and hoped for warmer days, but was disappointed. There were only a few days from then till I moved them into the cellar that were warm enough for the bees to go up and get the syrup. I think they emptied the pan twice. Nov. 30 real winter seemed to be on us, and I carried the bees to the cellar. There was a pan on this hive nearly full of syrup which I removed and marked the hive "Very poor."

I made no preparation, but left the covers on without any cushion or top ventilation, and no ventilation below except the summer entrance. The thermometer registered from 38 to 45 degrees almost all of the time, and the bees were constantly humming. Some weeks after they were put in a few dead bees began showing on the floor, and I suppose during the winter I swept up a quart of dead bees from the 10 colonies—the number I put in. They were let severely alone till March 5, 1905. It being a warm sunshiny day I carried out one colony. This was a colony of yellow Italians that I had developed last summer from a 3-frame nucleus. My reason for selecting this colony was that I noticed there was some dripping at the entrance, while the others were perfectly dry. I should state that this hive stood only 6 inches from the bottom of the cellar, while the others were a foot from the bottom and tiered up on each other. I found the bottom-board covered with a black muck and smelling ugly. I cleaned this all off. The bees had a fine flight and I returned them to the cellar that evening. There was a hive full of bees and some honey and abundance of brood in all stages. This, remember, was March 5.

March 17 being very warm in the morning, I went into the cellar, and although it was very dark it was full of bees, flying in every direction. I immediately opened the outside entrance and without coat, hat, or gloves carried out the 10 colonies. I got several doses of anti-rheumatic for my temerity. I put them on the summer stands and they have been there since. I found them nearly all very populous, but not a great supply of honey. There was one with only a few bees and every comb full of honey. It is building up rapidly now. It seemed to me that I took out more bees than I put in. In 2 colonies I am sure I did. The hives in these two instances would hardly hold the bees, and one of them sent off a swarm May 12, covering every frame in an 8-frame hive. It was a tremendously big swarm. Did they rear brood all winter?

Now the colony that swarmed is poor in honey. In fact, they are all getting skimped, as there were 4 big freezes here after fruit was in bloom, and I think these destroyed the saccharine in the blossoms. Then it is raining so much it is impossible to gather any nectar. I am going to have to feed some if it does not soon warm up and bring out white clover.

Now as to the colony fed syrup in November and marked "Very poor." It came through in fine condition and is now threatening to swarm, though it is almost destitute of honey. The colony of yellow Italians that I put out March 5 and then returned till March 17 (the day I took all of them out) and which was full of bees March 5, dwindled and died till they did not cover more than 3 frames. Was this because of the flight March 5, or was it because the bees were not healthy? I am unable to account for the early appearance of so many drones. Can you? Remember I am only a novice.

I reported No. 1 as sending out a very large swarm May 12. I put the new colony on the old stand, and moved the parent colony the width of itself west, expecting to carry it to some distant part of the yard when the 8 days were up. This morning (May 18) was cloudy and windy, the thermometer registering 58 degrees. The parent colony sent out another good swarm. I caught one queen, and saw another with the swarm, which I put back in the parent colony. May 19 I carried it to another part of the yard. Lying in front of this parent colony this morning is a dead queen, and a cap off of a queen-cell. Did the queen I returned kill another, or get killed? If it were not so cold I would examine the hive and see how many more queens are there.

ILLINOIS.

ANSWER.—As you are south of latitude 40 degrees, it would generally be supposed that outdoor wintering would be best for you; but your success in cellaring seems a pretty good warrant for its continuance.

One factor in your favor, judging from the sketch you send, is that there is abundant provision for ventilation without letting light into the cellar.

It is not at all likely that brood was reared all winter in any colony; but the rearing of so much brood at an unusually early date

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ITALIAN QUEENS
Tested.....$1.25 each
War. Tested 1.00 "
Untested ... .75 "
6 or more, 10 percent less.

No disease. Good Queens and prompt service guaranteed. If you want a business strain of bees send your order to

CHAS. M. DARROW,
23Atf R. F. D. No. 1. MILO, MO.

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Lewis' Goods at Factory Prices.

Root's Smokers and Extractors, Dadant's Comb Foundation, Bingham Smokers

Dovetailed hives with the famous COLORADO COVER. The best cover ever put on a bee-hive. Hives (if entirely complete) cost you no more with this cover than with other covers, but they are far better. WHERE DO YOU LIVE? We will quote you a price with freight paid to your station if you send us your list of what you intend to buy. We ship goods each year into every State east of the Rocky Mountains; let us ship to you.

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A Standard-Bred Italian Queen-Bee Free!

For Sending One New Subscriber.

As has been our custom heretofore we offer to mail a fine, Untested Italian Queen to the person who complies with the following conditions, all of which must be strictly followed:

1. The sender of a new subscriber must have his or her own subscription paid in advance at least to the end of this year

2. Sending your own name with the $1.00 for the Bee Journal will not entitle you to a Queen as a premium. The sender must be already a paid-in-advance subscriber as above, and the new subscriber must be a NEW subscriber; which means, further, that the new subscriber has never had the Bee Journal regularly, or at least not for a whole year previous to his name being sent in as a new one; and, also, the new subscriber must not be a member of the same family where the Bee Journal is already being taken.

We think we have made the foregoing sufficiently plain so that no error need be made. Our Premium Queens are too valuable to throw away—they must be earned in a legitimate way. They are worth working for.

We will book the orders as they come in and the Queens will be mailed

Will you have one or more?

If you cannot get a new subscriber, and want one of these Queens, we will send the American Bee Journal a year and the Queen—both for only $1.50. Address,

GEORGE W. YORK & CO., CHICAGO, ILL.

We are...... Manufacturers of Bee-Keepers' Supplies

SPECIAL!

Closing out a large quantity of No. 2 SECTIONS as long as they last, at $3.50 per thousand.

Write for Catalog.

MONDENG MFG. CO.,

147 and 149 Cedar Lake Road, MINNEAPOLIS, MINN.

Atf Please mention Bee Journal when writing

may have had something to do with the dwindling of the one colony. It probably suffered also for want of ventilation, as shown by the dampness while other colonies were dry. Possibly its being nearer the ground had also some effect. The flight March 5 was hardly to blame.

The early appearance of drones is no more than a mark of prosperity, and also a result of the fact that the season was earlier than usual, notwithstanding the fact that there has been so much backward weather since the opening of spring that the season is now no earlier than usual.

You should not wait 8 days till after the issue of the prime swarm before moving the old colony to a new location, for usually the second swarm issues at about that time. About a week is long enough, and that's too long if the prime swarm has been delayed as to issuing by bad weather.

I don't know whether the virgin queen you returned was killer or killed. There was a fight to the finish among all the queens present, and the strongest remained victor.

Queens! ITALIAN Queens!

By Return Mail

Queens from Root's Red Clover Stock and Golden Italian Queens, the best honey-gatherers in America. Untested, 50c each, or $6 00 per dozen. I guarantee safe delivery. Send your orders to

E. A. SIMMONS,

22Atf FORT DEPOSIT, ALA.

Please mention Bee Journal when writing

For Queens SEND TO JOHN W. PHARR Berclair, Tex.

He will furnish at same prices as last year: Tested, $1; Untested. 75c; 5 for $3.25; 10 for $6; 15 for $8.25; 25 for $12.50; 100 for $45. He breeds Goldens, Carniolans and 3-Band Italians. Also 1, 2, and 3 frame Nuclei, and full colonies. Prices given on application. Pharr pays the freight, and guarantees satisfaction on all Queens. To do justice and judgment is more acceptable with the Lord than sacrifice. —(Prov. 3: 21.) 6Atf

Please mention Bee Journal when writing

$21.35 to Asbury Park, N. J., $21.35

and return, via Nickel Plate Road. Tickets good via New York City.. Dates of sale, June 29 and 30 and July 1 and 2, with extreme return limit of Aug. 31, by depositing ticket. Chicago City Ticket Offices, 111 Adams St. and Auditorium Annex. Depot, La Salle and Van Buren Sts., on Elevated Loop. 8—23A4t

Southwestern Bee-keepers SAVE MONEY

See our prices on all BEE-KEEPERS' SUPPLIES before you buy. Send for Catalog. We carry a full and complete line, will not be undersold, and will discount prices of any competitor.

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We represent the American Can Co. in Texas as their sole and exclusive agents for Honey-Cans. We also handle Dadant & Sons' world-famous Comb Foundation exclusively. Get our prices before buying.

BEES AND QUEENS

In any quantity at all seasons of the year. Let us quote you.

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Bought and sold. We will buy your honey-crop, and we especially want your beeswax at highest market prices.

THE GRAHAM-HYDE BEE CO.,

(H. H. HYDE, Successor)

1Dtf SAN ANTONIO, TEXAS.

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Please Mention Bee Journal when writing advertisers.

Reports and Experiences

Bees Doing Well

Bees wintered well on the summer stands. No losses. One swarm came off yesterday, a good, large one. Hived nicely. Is this the first swarm reported this season in this region? One colony is working in the super. We hope for a good honey season. A. B. METTLER.
Will Co., Ill., May 24.

[We have published all the very early swarms that have been reported to us.—EDITOR.]

Heavy Winter Losses—Good Prospects

Apple-trees are in bloom now and bees are doing very well, but we still have some frost at nights. Some of my colonies in 12-frame hives have 9 frames of brood. The winter loss seemed very heavy just in this immediate locality, but mostly from lack of feed. There were also a great many queenless colonies this spring, and some spring dwindling.

Clover never looked more promising, and if nothing happens to prevent it we will have another 1903. I have found some queen-cells in my best colonies. HARVEY SMITH.
Ontario, Canada, May 22.

Shaken Swarms Without Shaking

On pages 411, 459, 493, 520, (1904) will be found references to a plan which I stated on page 411 under the head of "Shaken Swarms Without Shaking." I do not remember to have seen any other mention of it. I would like to call the attention of the readers to it,

BLACK BREASTED RED GAMES-"The KING of Poultry." Large size, good layers of finest eggs. Hardy and fearless, the best all purpose fowl. Willow legs and Bay eyes. Illustrated circular. 25th year. **H. H. FLICK, MANCHESTER, MD.**

☞ The most attractive eastern excursion during the coming summer will be to Asbury Park, N. J , on occasion of the annual meeting of National Educational Association, July 3 to 7, inclusive, via the Nickel Plate Road and its connections, either the West Shore or Lackawanna Road, with privilege of stop-over at Chautauqua Lake points, Niagara Falls and New York City. Rate, $21.35 for the round-trip. Dates of sale, June 29 and 30 and July 1 and 2, with extreme return limit of Aug. 31, by depositing ticket. Patrons of this route may have the choice of a ride over the most interesting mountain scenery in New York and Pennsylvania, and through the celebrated Delaware Water Gap, or through the beautiful Mohawk Valley and down the Hudson River, which also includes the privilege of a ride on day line boat on Hudson River, between Albany and New York City, in either direction, if desired. No excess fare charged on any train on Nickel Plate Road. Meals served in Nickel Plate dining cars, on American Club Meal Plan, ranging in price from 35c to $1.00; also a la carte. Chicago Depot, La Salle St. Station, corner Van Buren and La Salle Sts. City ticket offices, 111 Adams St. and Auditorium Annex.

For further particulars, address John Y. Calahan, General Agent, 113 Adams St., Room 298, Chicago. 7—23A4t

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Root's Goods at Root's Prices

Everything used by Bee-Keepers.
POUDER'S HONEY-JARS. Prompt Service.
Low Freight Rates. ∴ ∴ ∴ Catalog Free.

Hoosier Strain Italian Queen-Bees by Return Mail

Untested Queen	$ .75
Select Untested Queen	1.00
Tested Queen	1.00
Select Tested Queen	2.00
Select Breeding Queen	$5.00
Best Imported Queen	5.00
Fair Imported Queen	3.00

WALTER S. POUDER,
513-515 Massachusetts Ave., INDIANAPOLIS, IND.

Get Good Queens and Bees

It costs you no more ✣ We furnish them on short notice

Untested, 75 cents each; $4 for 6; or $7.50 per dozen. Tested, $1.25 each. Breeders, $3.
Nuclei—I frame with queen, $1.50; 2-frame, $2; 3-frame, $2.50.
Absolute satisfaction or no deal. We breed 6 pure races. Price-list describing them free.
We are agents for the **Dittmer Comb Foundation** for this State, and all that are nearer us than them, at Dittmer's prices. If you wish your Wax worked up into Foundation for cash, we will receive same and furnish you the Foundation from our stock, which will save you much time and freight.

THE BEE AND HONEY COMPANY, Beeville, Bee Co., Texas.

Golden Queens and Bees

Ready June 1. Hustlers for honey; very gentle, non-swarming. Price-list now ready—also an 8-page leaflet on queen-rearing, including my experience in curing pickled brood, black brood and bee-paralysis, sent free to all who apply.

HENRY ALLEY,
13Atf WENHAM, MASS.

If you want the Bee-Book
That covers the whole Apicultural Field more completely than any other published, send $1.20 to
Prof. A. J. Cook, Claremont, Cal.,
—FOR HIS—
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Liberal Discounts to the Trade.

Send for Our 1904 Catalog and Price-List.
OUR HIVES AND SECTIONS
Are Perfect in Workmanship and Material.
By sending in your order NOW, you will SAVE MONEY, and secure prompt shipment.
PAGE & LYON MFG. CO., New London, Wis. U.S.A

$87\frac{1}{2}$ Percent Saved
In mortality to those insured in the
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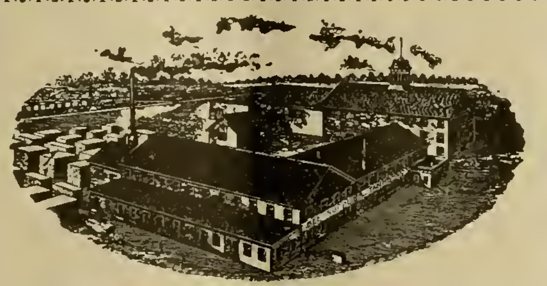
Security Mutual Life Insurance Company
EACH POLICY HOLDER is entitled to a Bond issued by the National Total Abstinence League.
YOU may hold a policy and BOND.
General and special agents wanted. Address,
3D28t A. S. RENNIE, Mgr., 614 Marquette Bldg., Chicago, Ill.



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Discount for Early Orders

We carry a large stock and greatest variety of everything needed in the Apiary, assuring BEST goods at the LOWEST prices, and prompt shipments. We want every bee-keeper to have our FREE ILLUSTRATED CATALOG, and read description of Alternating Hives, Massie Hives, etc. WRITE AT ONCE FOR CATALOG

AGENCIES.—Trester Supply Co., Lincoln, Neb.; Shugart & Ouren, Council Bluffs, Iowa; Fulton & Ford, Garden City, Kan.; I. H. Myers, Lamar, Colo.; Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex. **KRETCHMER MFG. CO., Red Oak, Iowa.**

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Send for Catalog, Samples and Discounts, and judge for yourself. 1904 output, 50 percent increase over 1903.

Full line of SUPPLIES, wholesale and retail.

Working Wax into Foundation for Cash a Specialty.
E. GRAINGER & Co., Toronto, Ont., Sole Agents in Canada for Dittmer's Foundation.

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GOOD DISCOUNTS ON EARLY ORDERS

COMPLETE STOCK OF BEE SUPPLIES—LEWIS CO.'S AT FACTORY PRICES

MUTH SPECIAL HIVE THE BEST DOVE TAIL MADE
SEND FOR CATALOG.

WE ARE ALWAYS IN THE MARKET TO BUY HONEY—SUBMIT PRICE.

THE FRED W. MUTH CO.
51 WALNUT STREET, CINCINNATI, OHIO.

CAR-LOADS

of Lewis' B-Ware come to our city for distribution. We carry a large stock which enables us to make immediate deliveries. We invite your inquiries for prices, Catalog, etc.

Louis Hanssen's Sons
Davenport, Iowa.

The Rietsche Press

Made of artificial stone. Practically indestructible, and giving entirely satisfactory results. Comb foundation made easily and quickly at less than half the cost of buying from the dealers. Price of Press, $1.50—cash with order. Address,

ADRIAN GETAZ,
44Atf KNOXVILLE, TENN.

☞J. G. Goodner, of this State, writes me that he "prefers to pay $25 for a Rietsche Press than do without it."—A. G.

Please mention Bee Journal when writing.

Wisconsin Basswood Sections

And Prompt Shipments

Is what we are making for our customers.

—**DOVETAILED HIVES AND SHIPPING-CASES**—

We carry a full line of SUPPLIES. Ask for Catalog.

THE MARSHFIELD MANUFACTURING CO., Marshfield, Wis.

Please mention Bee Journal when writing.

G. B. Lewis Co's Goods at Factory Prices

We carry a most complete line of BEE-KEEPERS' SUPPLIES. Send for catalog. It's free. Foundation Cutter free with each order, if you state where you saw this ad.

13Atf **NORRIS & ANSPACH, Kenton, Ohio.**

to see if any one has tried it. I have used it 3 seasons now and it works well with me. It saves lots of work, and, with variations that will occur to any one, does the job of shook swarming without shaking. The essential of the plan is using the bee-escape board to get all the field-bees into the old colony, and as many young ones as may be desired.

TURNER BUSWELL.

Somerset Co., Maine, May 22.

Bees Working in Decoy Hives

That afterthought on page 376 has made me do quite a bit of thinking. At first blush I was inclined to think that the chance to do something at cleaning out a decoy hive would make the bees more willing to accept it; but the more I think about it the less inclination I have in that direction. The sentimental fancy that bees are attached to a place because of their remembrance of hard work done there is somewhat attractive, Mr. Hasty, but it hasn't good wearing qualities. Of course they can't "go and work day after day in a hive where there is no work to do;" but that doesn't prove that they prefer a place where there is much work to do. If they were after work, they would prefer an empty hive to one filled with combs, and I have had evidence that they have no such preference.

I have had abundant opportunity to see scouts at work, and if you will drop in almost any day throughout the season I'll show you scouts working at hives containing empty

One-Piece Sections

"Columbia Brand"

Strictly High-Grade in Timber, Quality and Manufacture.

Prices on application.

COLUMBIA MFG. CO. ANTIGO, WIS.

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4 Largest Sizes Soot Burning

Never Go Out

And last from 5 to 21 years

BINGHAM Original Direct Draft CLEAN Bee Smokers

Pat'd 1878, '82, '92 & 1903

Tin 4-in. Smoke Engine 3½-inch 3-inch 2½-inch 2-inch Wonder
$1.50. $1.10. $1.00. 90c. 65c—per mail.

Sent on receipt of price per mail.

T. F. BINGHAM, Farwell, Mich.

OTISVILLE, PA., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. FRED FODNER.

Please mention Bee Journal when writing

"DADANT'S FOUNDATION"
IT EXCELS.

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WE GUARANTEE SATISFACTION.

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BEE-SUPPLIES
OF ALL KINDS.

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Beeswax Wanted at all Times.

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DADANT & SONS, Hamilton, Ill.

combs. They're by no means always at work, but seem to get a lot of enjoyment out of simply flying in and out of the empty hive, which exercise they keep up day after day till something happens in their native place to make them give up the scout business. As nearly as I can interpret their utterances, they say, "We like this place ever so much better for having combs already built; our business is to spend most of our daylight time here till the swarm is ready to come, and in the meantime if there is any cleaning up to do we may as well be at it."

Now, Mr. Hasty, don't you go and say I'm not a good interpreter. C. C. MILLER.
McHenry Co., Ill.

White Bush Clover

I send a new flower which appeared in this (Atascosa) County 2 years ago. It is a fine honey-plant and produces the finest honey we have. It blooms in May and lasts until August. What is its name? W. T. BRITE.
Atascosa Co., Tex., May 10.

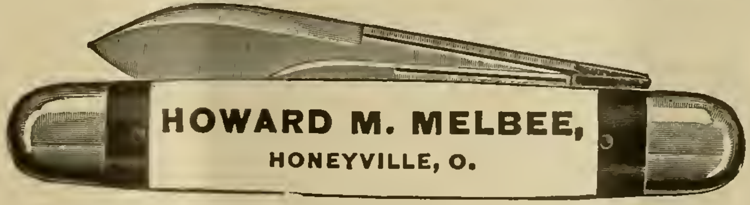
[The plant is the white bush clover (Petalostemon candidus), and is pretty well spread over the prairie States. Being a clover it would be sadly out of place if it did not give the bees something fine.—C. L. WALTON.]

The Cotton Controllable Hive

I notice on page 359 "The Wonderful (?) Cotton 'Controllable' Hive." I will give my experience with it. In June, 1885, I purchased one of the Cotton Controllable hives for $4 and put a swarm of hybrid bees into it. I never saw bees work better. Not being a very good honey season I fed them 50 cents worth of syrup to give them a start. Aug 10 following I took off 60 pounds of nice white honey in glass honey boxes, and sold it at 15 cents a pound. But the hive was so expensive that I abandoned it, and am now using the

The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.



[THIS CUT IS THE FULL SIZE OF THE KNIFE.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $2.00.

GEORGE W. YORK & CO. Chicago, Ill

☞ Please allow about two weeks for your knife order to be filled.

☞ Please mention the American Bee Journal when writing advertisers.

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BY RETURN FREIGHT OR EXPRESS, SEND TO

H. M. ARND, Manager.

York Honey AND BEE SUPPLY Co.

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(5 short blocks north of the C. & N. W. Ry. Passenger Station, using the Wells St. Cable Line from center of city to Ontario St.)

A FULL LINE OF BEE-SUPPLIES ON HAND

Consisting of **Hives**, **Sections**, **Shipping-Cases**—everything used by the practical, up-to-date bee-keeper.

Catalog and prices on Honey on application. If you want **Good Goods at Factory Prices and Prompt Shipment**, send your orders, or call on us.

BEESWAX WANTED—28c cash, or 30c when taking Bee-Supplies in exchange—delivered here.

$12.25 to Niagara Falls and Return via Nickel Plate Road, June 18, 19 and 20, with return limit of June 24, or by depositing ticket limit of July 14 may be obtained. Through vestibuled sleeping-cars. No excess fare charged on any train on the Nickel Plate Road Meals served in Nickel Plate dining-cars, on American Club Meal Plan, ranging in price from 35 cents to $1.00; also a la carte. For further information, write John Y. Calahan, General Agent, 113 Adams St., Room 298, Chicago, Ill. Passenger Station at Chicago, corner Van Buren and La Salle Sts., on the Elevated Loop. Chicago City Ticket Offices, 111 Adams St. and Auditorium Annex. 10—23A2t

VIRGINIA QUEENS Italian Queens secured by a cross, and years of careful selection from red-clover queens and superior stock obtained from W. Z Hutchinson. Untested queens, 75c; after June 15, 60c; tested queens, $1.00; after June 15, 75c; selected tested queens, $1 25; after June 15, $1.00. Write postal card for circular. **CHAS. KOEPPEN.**
17A26t FREDERICKSBURG, VA.

IN THE HEART OF MICHIGAN

Within a hundred miles of me are over ¾ of the bee-keepers of Michigan. I am on the Pere Marquette R.R., which completely covers this region. **Root's Goods, Factory Prices, Prompt Service, Low Freight.** Send for Catalog.

GEORGE E. HILTON,
15A12t FREMONT, MICH.

—ITALIAN—

Bees, Queens and Nuclei

Choice home-bred and imported stock. All queens reared in full colonies.

One untested queen..... $ .90
One tested queen......... 1.10
One select tested queen.. 1.40
One breeding queen 2.20
One comb nucleus (no queen)................. 1.10

All grades ready to send by return mail.

Safe arrival guaranteed For prices on quantities and description of each grade of Queens, send for free price-list. **J. L. STRONG.**
204 East Logan Street CLARINDA IOWA.
14Atf Please mention the Bee Journal.

Do You Need Queens? By Return Mail?

If so, we can fill your order with the best Queens that money can buy. Try our strain of 3-band Italians; they will not disappoint you with empty supers. Untested Queens, 75 cents; $8 per doz. Tested Queens, $1 each. Send for circular. **J. W. K. SHAW & CO.**
13Atf LOREAUVILLE, Iberia Par., LA.
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No Breakage IN OUR Sections

Out of 1500 shipped one of our customers, that he folded, not one broke. There are but few No. 1 Sections on the market that will equal this record. In addition our price for No. 2 Sections is so far below the No. 1 that you can't afford to send away for your **SUPPLIES** anywhere else.

Our goods are made on honor and any article not entirely satisfactory to you will be replaced or money refunded. Send us a sample order for a crate of our No. 2 Sections. Do it now.

JOHN DOLL & SON,
Power Building, MINNEAPOLIS, MINN.

Danzenbaker and Langstroth-Simplicity hives exclusively.

At that time, in 1885, the hive and system of management was all right, but the price of the hive and bees—$20—was an outrage. There being no patent on the Cotton hive, they can be furnished complete with a full set of glass honey boxes, holding about 2 pounds of honey each, with a full colony of Italian bees, for $10. I have full and complete plans for the hive and outfit. SUBSCRIBER.

Boone Co., Mo., May 26.

Wintering—Discouraging Outlook

Last season I lost 184 colonies out of 185. Then I bought, requeened, and put into the cellar 70 strong colonies, and carried from the cellar 40 live colonies, 25 of them very strong. Yesterday I took an inventory, and I found 8 colonies with about 8 pints of bees, and I am having no worse luck than my neighbors.

I will give, as nearly as I can, the number of colonies of bees in this and 5 adjoining towns 20 years ago, and contrast them with the number at the present time:

Rupert,	1885	2100	Same,	1905	20
Pawlet,	"	700	"	"	4
Dasset,	"	400	"	"	60
Sandgate,	"	300	"	"	2
Hebron, N. Y.,	1885	350	"	"	40
Salem,	1885	450	"	"	70

I have had letters from other towns in the county, and the decrease is about the same. I had a letter from a man in Sunderland, Vt., saying that he had only 3 colonies left out of 80 which he had 3 years ago.

I have tried every way that I could read or think of to keep the bees. I have not lost 20 colonies because of their not having stores enough, and in 55 years I have never had a swarm winter in any kind of double-walled hive left out-doors, never had them in 8-frame dovetailed hives but 2 winters, and have built 2 new houses at a cost of $5000, my aim in building both these houses being to have a cellar that would winter bees. They are dry and well-ventilated, and the temperature is from 42 to 46 degrees, but after the bees have been in the cellar about 4 weeks they will begin to roar and come out, and they keep this up all winter, and if I leave them out they do the same. I will give any one $100 who will give me a successful plan that will winter and spring 90 percent of the strong colonies put into winter quarters. The time will soon come when the hum of the honey-bee on the willow or apple tree, will not be heard in this vicinity. C. M. LINCOLN.

Bennington Co., Vt., May 24.

Strange Season in Texas

We are having a strange season in Texas. Uvalde has lost its honey crop for this year, we understand, but suppose they will have some honey. We are having a fine honey-flow now from horsemint, which bids fair to be the largest crop in years, for this location.

SOUTHWESTERN BEE CO.

Bexar Co., Tex., May 27.

HONEY-JARS.

For a limited time we offer No.25 Honey-Jars, porcelain cover, metal screw cap, holding one pound of honey net, one gross in case complete in 5-gross lots, $4.00 per gross; less quantities, $4.50 per gross, f.o.b. New York. If you want to secure some, let us know at once.

HILDRETH & SEGELKEN,
265 & 267 GREENWICH ST., NEW YORK, N. Y.
11Atf Please mention the Bee Journal.

QUEENS ITALIAN QUEENS
BY RETURN MAIL.

Try Taylor's 3 banded leather-colored and 5-banded Golden Queens—the best honey-gatherers in America. Untested, 75c each, or $8 per dozen; tested, $1, or $10 per dozen; select tested, $1.50 each: breeders, the best, $3 each. I have been breeding queens for 17 years, and I know what a good queen is. No small queens sent out. I guarantee safe delivery. Send your orders to J. W. TAYLOR, Ozan, Ark.
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Guaranteed Superiority!

Lowest Prices

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New .. Illustrated .. Catalog free; also sample copy of

The American Bee-Keeper

(Monthly, 50 cts. a Year.)

The best magazine for beginners. (It has been published by us regularly for 15 years.)

Address,

THE W. T. FALCONER MFG. CO.,

JAMESTOWN, N. Y.

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Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

Honey and ✣ Beeswax ✣

Chicago, May 8.—With April about all the trade in comb honey ceases so far as this market is concerned; occasionally a case sells, but no lots, so that prices now are practically without change, pending the new crop. Extracted is exceedingly slow of sale; white ranges from 5½@7c, and amber 5½@6c, according to flavor, quality and package. Beeswax in active demand at 30c. R. A. Burnett & Co.

Cincinnati, June 2.—There is only a fair demand for honey at the present time. We quote amber extracted honey in barrels at 4¾@6c. according to quality. White clover extracted at 6½@8c. The comb honey market is practically closed for the summer. Beeswax, 29c.
The Fred W. Muth Co.

Boston, May 23.—Our honey market continues very dull, with very little movement to be noted. We quote fancy white at 14c; No. 1, 12½@13c. Extracted, from 6@8c, according to quality. Blake, Scott & Lee.

Philadelphia, May 19.—The season is about over for the sale of comb honey, with so few sales that the market is not established enough to quote price. Extracted honey has met with some demand, and we quote as follows: White, 6@7c; amber, 5½@6c. Beeswax, 28c.

We are producers of honey and do not handle on commission. Wm. A. Selser.

New York, April 19.—There is no change in the condition of the honey market. Very little comb honey selling and prices ruling about the same as our last quotations. Extracted in fair demand only. Beeswax firm at 30c.
Hildreth & Segelken.

Kansas City, May 12.—The honey situation is a little stronger, and there is but little honey left in the hand of the dealers. Best honey bringing from $2.25 to $2.50 a case; amber at from 25@50c a case lower. Extracted, 4½@6c. Beeswax, 28c. C. C. Clemons & Co.

Cincinnati, O., May 18.—The large stock of comb honey yet offered with hardly any demand causes lower prices. I quote fancy water-white at 12c; other grades lower, in proportion. Extracted is in usual demand for this season of the year. We quote white clover 7@8c; amber in barrels at 5¼@5½c; in cans, 5¾@6 cents. Beeswax, 28c. C. H. W. Weber.

Albany, N.Y., Feb. 8.—Honey market dull this extreme cold weather, especially comb, which candies or granulates and cracks easily. We quote: Fancy white, 13@14c; No. 1, 12@13c; mixed, 10@11c; buckwheat, 10@11c. Extracted, better demand: Buckwheat, 6@6½c; white, 6@6½c. Buckwheat most in demand, as the Jewish people will have no other. Beeswax, 30@32c. H. R. Wright.

San Francisco, May 3.—White comb, 1-lb. sections, 11@12 cents; amber, 8@10c. Extracted-white, 5½@6 cents; light amber, 4@5c; amber, 3@3½c; dark amber, 2½@3c. Beeswax-good to choice, light, 29@30c; dark, 27@28c.

The steamer City of Peking, sailing Saturday last, took 85 cases for Belgium. Movement on local account is light. Buyers are holding off, anticipating arrivals of new crop at an early day.

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Partner telling his best girl about the fine

Italian Queens

in their apiary. Don't order a queen till you get one of their circulars.

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⁂

This is only one of the many remarkable incidents related in our little book, "Bee Pranks." The cut to the left is a reproduction of the front page of this little pamphlet which is compiled from newspaper clippings. It will amuse and instruct you.

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Oct. 31 and Nov. 1, 2.

American Bee Journal

45th Year | CHICAGO, ILL., JUNE 15, 1905 | No. 24

WEEKLY

ROBERT A. HOLEKAMP.
(See page 420)

GLEANINGS

IN BEE-CULTURE

It is most possible that every reader of the American Bee Journal is familiar with Gleanings. But how many are numbered among its subscribers? They all should be, for a bee-keeper that finds one bee-paper profitable can afford another and still increase his profits. Gleanings has many points of excellence. We outline a few of them below. But we would prefer to have you read our new "Gleanings Prospectus." This is a 24-page booklet telling all about Gleanings. A postal will bring it!

◆

Contributors

Gleanings has a splendid array of departments and contributors. Every issue should be worth the price of a year's subscription to any bee-keeper. We can't give a complete list here, but if you read the list below you will *see* how valuable a paper we are publishing.

◆

Stray Straws

By Dr. C. C. Miller. In this department you will find him at his best.

◆

Bee-Keeping Among the Rockies

By J. A. Green. The bee-keepers of this region will find their interests well taken care of; indeed, Mr. Green's articles are read with pleasure everywhere.

◆

Gleanings from the Pacific Coast

By Prof. A. J. Cook. The Coast bee-keepers have problems of their own, and Prof. Cook is perhaps the best authority. His department is always timely and of great interest.

◆

Bee-Keeping in the Southwest

By Louis H. Scholl. The Southwest is a great bee-keeping country. Mr. Scholl is a practical bee-keeper and a writer of note.

◆

Conversations with Doolittle

Perhaps no one writer has contributed so much information to modern bee-keeping. In this department appear his best articles, and no bee-keeper can afford to miss a single one.

◆

Pickings

By Stenog. A review of all apicultural literature.

◆

Heads of Grain

A gold mine of valuable ideals for the bee-keeper. Every issue contains 20 to 30 short articles by bee-keepers, telling of their favorite way of doing things. Illustrated by an expert.

◆

General Correspondence

Should have been entitled, "Golden Correspondence." In every number the most successful bee-keepers of the world tell their experiences. No bee-keeper can afford to miss a word from such men as these: Hoffman, Burnett, Hershiser, Hyde, Alexander, Bingham, West, Phillips, etc., etc.

Illustrations

Every number of Gleanings contains such a wealth of illustrations that it is exceeded by no other bee-paper in the world. Full-page and less of the best half-tones printed on special paper as well as numerous line cuts. This item alone doubles the value of Gleanings.

◆

Special Offers

To induce every reader of the American Bee Journal to read Gleanings also, we make the following special offers: Pick out the one that suits you, and then send **TO-DAY**. You cannot regret this move.

1.	Gleanings and the American Bee Journal one year	$1.75
2.	Six months' Trial	.25
3.	Gleanings 1 year, and Red Clover Italian Queen (April, May, or June)	1.50
4.	Gleanings 1 year and A B C of Bee-Culture, postpaid	2.00
5.	Gleanings 1 year and Langstroth revised, postpaid	2.00
6.	Gleanings 1 year and Doolittle's Queen-Rearing, postpaid	1.75
7.	Gleanings 1 year and Standard Corneil Smoker, postpaid	1.85

◆

Our Second Prize Photo Competition

Is open to all subscribers of the American Bee Journal. Read the conditions over and try to win one of our prizes:

We offer the following prizes for different kinds of photos: Class A, photo of apiary. Class B, photo of comb honey. Class C, photo of any object of interest to bee-keepers, not included in first two classes.

REWARDS

Each class will be awarded a first, second, and third prize. First prize, winner will be allowed to select goods from our catalog to the amount of $5; second prize, same as first, except amount is $3; third prize, same as first, except amount is $2.

*

CONDITIONS

Contest closes Sept. 1, 1905. Contest is open to all ages, and limited to United States and Canada, as the foreign contest is still on. We suggest that photos of honey should show the product of one colony, and be arranged so as to expose the entire face of each section, similar to the photos often shown by Mr. Danzenbaker. If preferred, a select 10 sections could be photographed, or any other idea may be used.

Photos should not be marked in any way, but your full name and address should be put on a separate sheet, and enclosed with photo, marked "For prize competition." Do not neglect this. Photos not winning a prize will be paid for according to the value to us, if we can use them. The prizes will be awarded with special reference to clearness of photo and artistic beauty and the instructive and interest-drawing power. No photo returned unless stamp is enclosed for return. Prize-winning photos are to become our property.

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Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor CHICAGO, ILL., JUNE 15, 1905 Vol. XLV—No. 24

Editorial Notes and Comments

Honey Definition and Standards

Prof. E. N. Eaton, analyst of the Illinois State Food Commission, has sent us the following, with the request that we submit it to bee-keepers for their opinions, the same to be sent to this office, when we will refer them to him:

Suggested Definition and Standards for Honey

ANIMAL PRODUCTS
Sugars
COMMERCIAL HONEY—

Commercial honey is nectar of flowers or similar saccharine secretions or exudations gathered from natural sources by the honey-bee, transformed and stored in a comb composed exclusively of bee's wax.

Comb Honey is honey in the comb.

Extracted Honey is honey removed from the comb.

COMMON STANDARD—

Should be ripe, unfermented, free from objectionable odor and flavor, and, if extracted honey, should weigh at least 11½ pounds per gallon.

CHEMICAL STANDARD— Percent
Water—maximum....................20
Sucrose (cane-sugar)—max........ 7

Prof. Eaton is endeavoring to assist in establishing a code of definitions and standards of food products for the guidance of the various State Food Commissions, and will appreciate any aid that bee-keepers can give him on the subject of honey.

◆

Keeping Qualities of Honey

Extracted honey is sometimes spoken of as a thing that may be kept an indefinite number of years without deterioration—unless granulation be considered deterioration. But those who have tried keeping it a number of years are well aware that it undergoes changes easily recognizable—changes that are not for the better—it is reasonable to suppose that some deterioration takes place in a much shorter time, even if that change be not so easily recognized.

The change that takes place is both in color and in body. At the Colorado State convention, as reported in Irrigation, H. Rauchfuss showed a sample of comb honey 3 years old that was in a fine state of preservation, but "it was getting darker in color with each season, that is, the honey itself within the comb was darkening." He also showed a 14 year old sample of extracted honey gathered from cleome "which was almost wholly liquid, but was very much darkened with age. The samples of extracted had all candied promptly after being extracted, but after a time would again liquefy wholly or in part, about once in a year or two years passing from one to the other condition and back again.

"The later granulations are never so firm as the first, and usually the liquefyings are not complete either, it gradually changes to a semi-liquid condition seldom all becoming liquid, and as it candies again it is more truly a granulation, the granules being mixed with liquid parts. All samples of aged honeys show a decided tendency to become darker with age."

Mr. R. C. Aikin said: "I have a sample of white clover extracted honey 30 years old. It has showed the same peculiarities as that by Mr. Rauchfuss. It remained liquid the better part of a year, but gradually candied. I do not remember how long it was candied, but think it was about the second year that it began to liquefy standing on a shelf in a comparatively warm place not far from a stove, until it was almost entirely liquid except some granules. After this it candied as described by Mr. Rauchfuss, not a true condition, but a liquid full of granules. It has since become almost entirely liquid, remaining for the past 15 or 20 years a liquid with a cake of crystallized honey in it together with some granules throughout the mass. It is now about as dark as dark sorghum molasses, such as we used to make 20 or 30 years ago."

◆

Stewart's Foul-Brood Treatment

The Bee-Keepers' Review gives a plan of treatment obtained from W. H. H. Stewart, as follows:

Mr. Stewart's plan is simply that of giving the colony a new location, and allowing the returning bees to enter any colonies that they choose—probably those standing near the old stand. The diseased colony is moved in the evening, after the bees have stopped flying. Even if the moving does disturb the bees, or cause them to fill themselves with honey, none fly from the hive, and by morning all has become quiet, and all bees leaving the hive will be empty and in a normal condition. When such bees return with a load, they go back to the old location, and join some neighboring colony. They are not lost. Other things being equal, a bee is worth as much in one colony as in another.

In 8 or 10 days the hive is *again* moved to a new location, and left there several days, when it is picked up and carried into the shop. As the bees hatch out, and become old enough to fly, they leave the hive, fly to the window, go out through an escape, and probably join some colony in the apiary.

The combs eventually become free of bees or healthy brood, when they may be rendered into wax after extracting the honey. All this has been accomplished without any risky shaking off of the bees, or even so much as *the opening of a hive.* Can anything be more simple or easy of accomplishment?

This is somewhat after the Baldridge plan, which allows the bees of a diseased colony to escape in front of a neighboring colony through an escape. In the Baldridge plan of curing foul brood the trouble of putting on the escape stands against the two removals in the Stewart plan, but the Baldridge plan has the advantage that no robbers can enter the infected hive, while with the Stewart plan the colony, weakened by removal, and especially by the second removal, would most surely be at times attacked by robbers. To be sure, an escape could be used with the Stewart plan, but then it would have no advantage over the other.

◆

Celluloid for Queen-Excluders

In the British Bee Journal Mr. Reid is reported as saying that he had used nothing else but celluloid for queen-excluders, and that they continued sound and could be depended upon.

◆

Disinfecting Combs With Formalin

At the Ontario convention, as reported in the Canadian Bee Journal, Mr. Sibbald said:

"A year ago I thought of curing by the formalin method, and went to considerable trouble to get everything in good shape, according to the directions as I understood them. I fumigated a number of combs, and I think I turned on the formalin gas for about two hours, and I used it pretty strong, because I could hardly take out the combs the next day, but the disease developed after I gave the combs back to the bees. I thought perhaps I didn't give them enough formalin, and so I kept the lamp going all night; not only was the box full of gas, but the room also. I left them for two weeks in that box, covered up tight, and when I came to take them out I could hardly bear to reach down into the box, the formalin was so strong. I gave the comb again to the bees, and the disease developed again."

Prof. Harrison, while admitting that Mr. Sibbald had been very thorough in his work, still felt that if used correctly formalin might be depended upon. He told about its use in disinfecting rooms from diphtheria, tuberculosis and small-pox, and said:

> "I am convinced of its efficiency for the 'bacillus alvei' if it is properly done. In all these cases, in the application of formalin vapor, there is one point to be remembered, that the gas generated is more potent, that is to say, more germ-killing if the temperature is low, and if there is lots of moisture in the air—a low temperature—because it is easy to hold the moisture in the air when the temperature is low rather than high. In all these cases one has either to hang wet sheets in the room or else get moisture in the room by turning on the steam jet, allowing it to cool a little. When the air is well saturated with moisture, and if there is bedding or anything of that sort to disinfect, we very frequently sprinkle it with water in order to get more moisture present, then the gas is much more potent and more effective. That is also true of disinfecting any combs you may have. I would strongly advise either the spraying or sprinkling of them. I suppose it would not hurt to dip them in water. Then, having generated the gas, they should be left in this tight box for at least 12 hours.

◆

New South Wales Association Rules

Besides having Christmas in hot weather, our Australian friends have some other things different from what they are on this side of the globe. Among the "Rules and Objects" of the New South Wales Bee-Farmers' Association are the following:

> 3. To advise members as to suitable localities for establishing apiaries.
>
> 4. Any bee-keeper can become a member on approval of committee, subscription 2–6 per annum.
>
> 5. That every member with more than 50 colonies shall be allowed an extra vote for every additional 50 effective colonies.
>
> 6. No member be eligible for office who has less than 50 effective colonies, or his subscription is in arrear.
>
> 11. Supply dealers or commission agents can not become members.
>
> 12. Members unable to attend meetings or conventions can authorize or nominate any member they know will be present to vote for them on any subject brought forward. Such vote or votes to be in addition to the member's present own vote.

It would be a good bit of innovation to have our National Association adopt such rules. It would be something of an undertaking to follow rule No. 3, advising members in what part of Canada or the United States to establish apiaries. The smaller territory in the case of our antipodal friends under consideration makes such advising more feasible, New South Wales forming but little more than a tenth of Australia; yet New South Wales is, after all, somewhat larger in size than a calf-pasture, for our New England States might be cut out of it four times, leaving still enough stuff to make the State of Pennsylvania.

In some respects it might be a good thing to measure a member's power by the number of his colonies, in other respects it would not.

In this country it has seemed rather the policy to court the co-operation of "supply dealers or commission agents," and where there is such a manifest community of interest that policy is likely to remain undisturbed. Possibly conditions in New South Wales may make it advisable to bar them out of membership.

Miscellaneous News Items

Mr. Wm. Russell, 4810 38th Ave., South, Minneapolis, Minn., has just recently been appointed inspector of apiaries for Minnesota, his commission taking effect Aug. 1, 1905, and being good for two years. We congratulate the bee-keepers of Minnesota on this appointment, and we trust they will patronize Mr. Russell should their bees become diseased.

◆

Bees and Honey at Illinois Fair.—We have received a copy of the Premium List issued by the State Board of Agriculture for the 1905 Illinois State Fair, to be held at Springfield, Sept. 30 to Oct. 7. The premiums offered on apiarian displays are as follows:

	1st	2d	3d
Display of comb honey..........	$20	$15	$10
Collection of labeled cases containing 12 or more pounds of white honey from different flowers....	8	5	3
Collection of labeled cases containing 12 or more pounds of amber or dark honey from different flowers....................	8	5	3
Case of white clover comb honey, 12 to 24 pounds	4	3	2
Case of sweet clover comb honey, 12 to 24 pounds	4	3	2
Case of basswood comb honey, 12 to 24 pounds	4	3	2
Display of extracted honey.......	20	15	10
Honey extracted on the grounds..	5	3	2
Frame of comb honey for extracting	5	3	2
Display of candied honey.........	20	15	10
Display of beeswax...............	15	10	5
One frame of observatory hive dark Italian bees..................	4	3	2
One frame of observatory hive golden Italian bees............	4	3	2
One frame of observatory hive Carniolan bees	4	3	2
Honey-vinegar, ½ gallon, with recipe for making...............	4	3	2
Display of designs in honey......	10	7	5
Display of designs in beeswax ..	10	7	5

OPEN TO THE WORLD.

The judges in this lot will be governed by the code of rules adopted by the Illinois State Bee-Keepers' Association.

Five hundred pounds only will receive full score for quantity in displays of comb and extracted honey, and 300 pounds only in displays of candied honey; 50 pounds will receive full score for quantity in display of beeswax.

Only one entry will be allowed by each exhibitor for any one premium.

We trust that there may be a proper interest shown by bee-keepers in the foregoing, as the Illinois State Fair managers are treating them well in their premium awards. A copy of the full Premium List can be had by addressing Mr. H. J. Cater, Libertyville, Ill., who is the able superintendent of the department known as "Dairy and Apiary."

◆

West Michigan Fair and Bee-Keeping.—We have received the following from Mr. A. G. Woodman, superintendent of the apiarian department of the West Michigan State Fair, which should interest bee-keepers in Michigan, at least:

EDITOR AMERICAN BEE JOURNAL:—It might be of interest to bee-keepers, especially those in Michigan, to know that we have just secured an addition of $50 to the Premium List in the Apiarian Department of the West Michigan State Fair, to be held in Grand Rapids, Sept. 18 to 22, 1905. We also have a promise of more the coming year should we make a showing. What additions we get in the future will depend upon the show those interested put up. We want to urge bee-keepers to come and advertise the business—their business—create an interest in and a demand for their product, and at the same time, if they win the prizes, they will be paid for advertising their own goods—free advertising.

The Premium List will be issued as follows, with competition open to the world:

	1st	2d	3d
Nuclei of hybrid bees............	$ 3	$ 2	$ 1
Nuclei of Italian bees............	3	2	1
Nuclei of Carniolan bees.........	3	2	1
Queen-rearing nuclei..............	5	3	2
Three different strains of bees....	3	2	1
Specimens of comb honey—not less than 10 pounds.................	5	3	2
Display of comb honey—most attractive.........................	25	15	10
Specimen of extracted honey—not less than 10 pounds............	4	3	2
Display of extracted honey—most attractive.....................	20	10	5
Beeswax—not less than 10 pounds	3	2	1
Most attractive display of honey-producing plants, pressed and mounted........................	3	2	1
Largest number of specimens of different kinds of honey, each named	2	1	
Largest, best, most interesting and instructive exhibit in this department	15	10	6

Diploma to best exhibit.

The bee-keepers of West Michigan are to be congratulated on their success, doubtless through the efforts of Mr. Woodman. It is hoped bee-keeping at the next Fair may be so well represented that another year even a larger Premium List may be offered.

◆

Mr. and Mrs. H. H. Hyde, of Bexar Co., Tex., are rejoicing over a fine 9-pound boy, born June 2. Both mother and child are doing well. Our congratulations are hereby extended. "Papa" Hyde says this "adds one more name to the bee-keeping fraternity in Texas." But he doesn't give the lad's name. It's perhaps a case of "Hyde and seek." The "Hyde" is there, and now they'll "seek"—a name. As Texas is a big State it may take quite a while to find one that is suitable.

Biographical

ROBT. A. HOLEKAMP

On the first page appears the portrait of Robt. A. Holekamp, of St. Louis Co., Mo., one of the members of the Executive Board of The Honey-Producers' League.

In the early part of 1870 he arrived in this country, being 22 years of age, from the Province of Hanover, Germany, where he had received a good business education, and had just finished a year as volunteer in the Prussian Army. He soon found employment as book-keeper and salesman in an agricultural implement and hardware business in St. Louis, which business he left a few years later to fill a position as bank teller.

In these positions Mr. Holekamp had an opportunity to become well acquainted with the business methods of this country, and they prepared him for his later business career. He had become acquainted with a firm which started a sash and door business, but which dissolved a few years later by dividing the assets of the business.

One of the former members of this firm, living in Wisconsin, and running a sash and door factory there, made him business manager in St. Louis, to assist his young son whom he made his partner. The business went on for a few years when the senior member of the firm died, and the son and Mr. H. bought the business and continued it under the firm name of Gray & Holekamp.

Their business grew rapidly, and soon became one of the largest of its kind in the country, their customers being all over the South and West, and every new railroad in their territory brought new trade.

A few years later the former partner of his old employer lost his health. They bought him out and moved into his just finished, new and commodious quarters. After a few years more Mr. H. bought out his partner, and continued the business in his own name.

The continuous strain of managing a large business, and at the same time doing a good deal of traveling to work up new territory, gradually told on his health, and finding that rest was necessary, he sold his business.

After he was through winding up his old business affairs, he looked around for some business where he could spend his time out in the open air, and soon bought an interest in a sawmill and timber-lands in southeast Missouri, and incorporated the business.

He and his family lived there for a number of years, right in the wilderness, away from civilization, and surrounded only by about 50 little houses, the dwellings of his milkhands and teamsters. Mr. Holekamp says those years in the wilderness were the happiest of his life. He was busy from early till late, but enjoyed splendid health, and soon built up a nice business, but the necessity of giving their children a better education than it was possible to give them in the backwoods, compelled him to give up business again and to return to St. Louis. There he bought an interest in a surgical instrument business, which he sold several years ago.

Mr. H. kept his old sawmill home for a number of years, running a farm and spending the summers there during the time of the children's school vacation, but sold it a few years ago, it being rather unhandy to run a farm so far away. He has no business now except looking after his rented property and attending to his bees, which keeps him as busy as he cares to be. He has kept bees for the last 15 years, and considers the work with them the most interesting outdoor employment he can find.

It will be seen from the foregoing sketch that Mr. Holekamp has had a very extensive as well as successful business experience aside from his 15 years of bee-keeping. It would seem that he will prove to be a very valuable member of the Executive Board of The Honey-Producers' League. He is right in his prime, and should be quite an addition to the ranks of those who are endeavoring to improve the keeping of bees as a business.

Contributed Special Articles

Securing Large Increase—Keeping Queens

BY G. M. DOOLITTLE

IN a late number of the American Bee Journal I closed what I had to say with the remark that "I was open to any further question on the subject." This has brought me a lot of questions, and in this I will try to answer briefly those from a man in West Virginia.

He first wishes to know how I would work to secure a large increase, something like that which I wrote about as given in the April 27 issue of the American Bee Journal, only that he wishes to use comb foundation instead of frames filled with combs. Bees can not be increased as fast where foundation is to be used as with plenty of drawn combs; but they can be increased faster where comb foundation is provided than is possible where the combs are to be built in frames having only starters in them. In using foundation, proceed the same as I gave in that article until quite a few young bees have emerged in the spring, and the colonies you have are beginning to get fairly prosperous, when a frame of foundation is to be put in each colony between two frames containing brood, and left one, two or three days, as is necessary for the bees to draw out the side-walls to the cells from ⅛ to ¼ of an inch, but not long enough for the queen to lay many eggs in these drawn-out cells. If honey is not coming in from the fields in sufficient quantities for the bees to think they can work on the foundation, then the colonies must be fed in sufficient quantities for them to do so. In this way keep on till you have sufficient frames of this drawn foundation to proceed as I gave in that April 27 issue of the American Bee Journal.

Having these frames of drawn foundation, go to making your colonies as there given, and if you can not procure enough frames so fixed from the few colonies you have in the spring, those which you will make will work foundation as soon as their queens get well to laying, and thus these new colonies will help along with the work. But always remember that it is useless to try to make any very weak colonies contribute to any part of this work. Far better wait a little for all to get strong enough to do this work to advantage.

If you do not have foundation enough to use full sheets in all of your frames, then use the larger part of it as above, when the rest can be cut into strips of four rows of cells each and fastened to the top-bars of the frames, when, in due time, they are to be placed in between the combs of the colonies you have made (those having young queens), when the bees will build them down with comb of the worker size of cells. Remember you *must* feed at all times when nectar is not coming in from the fields, if you would have foundation drawn out, or combs built from starters, as the bees will do nothing at this work in times of a famine of nectar.

KEEPING QUEENS UNTIL NEEDED—QUEEN-NURSERY.

The writer next wants to know how he can keep queens when he buys them, till he is ready to use them, and also what a queen-nursery is. I will answer the last question first.

A queen-nursery is a frame having cages in it, each cage of which is fixed for the accommodation of one queen. The cages are generally made out of a piece of inch lumber, the same being cut about 3 inches square. In the center of this piece a 2-inch hole is bored, and then two ⅝ holes are bored through the edge of the piece till they open into the large hole. Now the large hole is covered on both sides with wire-cloth, and one of the small holes filled with "queen candy," or a sponge filled with honey for food for the queen, while the other is left for a doorway to be used in putting the queen in and letting her out. Both holes are to be closed with a proper sized cork, so that the bees from any colony into which it is put can not get to either the queen or her food.

When you have enough of these cages made to fill an empty frame, and they are put in place so that the frame is full, that frame of cages is called a "queen-nursery."

And to use it, provision the food apartment, run in the queen or queens, and hang the nursery in place of a brood-frame in any colony. Some think it best to hang this nursery, when the queens are in it, in a queenless colony, and others are equally sure that it is best to keep it in a colony having a laying queen, as the bees in a queenless colony will cluster on the most of the cages, and try as much as they can to torment the queens in these blocks or cages of the nursery. But, with me, the bees will cluster on the blocks to a greater or less extent, no matter into what colony they are placed, and, as a rule, I do not like to keep queens thus longer than can be helped, as it is against "queen nature" to be thus confined, which is often shown by the queens dying after being so confined for from a week to a month.

I use these nurseries most largely where I have more "ripe" queen-cells than I can use just at the time they are ripe. Just put the ripe cell into the hole that is used as a doorway for the queen, and when the virgin emerges she is in the cage, ready to be used just as soon after she has emerged as possible, for I consider that the shorter time she is in this or any other cage, the better queen she will make.

Next, and last, the questioner wishes to know more about slipping the queen-excluding zinc down into a hive so that queen-cells will be built in the side not having the queen, which I mentioned in the other article, this plan being used in early spring, or at any other time when colonies are not strong enough to rear queen-cells in an upper story.

Take one of your hives and nail on a tight bottom-board. Now, if you have a 10-frame hive, put in a sheet of the perforated metal just where the fourth frame would stand when the hive has the whole 10 frames in it. This is best done by making a saw-kerf, just there, in each end of the hive on the inside, so that this sheet of zinc can be slipped in and out at pleasure.

Now slip in the sheet of queen-excluding metal or zinc, and make sure that there are no places where the queen can get above it, around it, or under it, when you are ready to take it out to the apiary and place one of your strongest colonies in it. To do this, look over the combs of the strong colony till you find the queen, when the comb she is on is to be set out of the hive till you have things arranged. Having found the queen, you will set in the smaller side of your prepared hive two frames of the youngest brood you can find, and one where you can see the bees just gnawing from the cells, all of which combs should have more or less honey along the tops of the combs and at the upper corners. Having these combs in place, set in a frame which is the most full of brood of any, next the zinc in the larger side of the hive. Now set in the frame having the queen on it, and then fill out that side of the hive, which will contain six combs, leaving out the one which would go in where the sheet of perforated metal is used. The comb to be left out is one having no brood in it, which you generally can find. If not, give this comb of brood to some other colony, after having shaken the bees off it into their own colony.

The next day after having the colony so fixed, start your queen-cells as given in "Scientific Queen-Rearing," take out the frame of hatching brood of the three put in the smaller side of the hive, draw the next to the side of the hive and put in the frame of prepared queen-cups in the open place. If there is a frame in the larger side of the hive which does not have brood in it, take that out so as to give place to this frame of brood; otherwise shake off the bees and give it to some other colony. Now close the hive, and in three days, if you look, you will find nearly every one of the queen-cell cups on their way toward completed queen-cells, if you are anywhere near as successful as I am.

I can see no difference as regards the good qualities of queens reared in this way and those reared in upper stories, as given in "Scientific Queen-Rearing;" but the work is less with the upper stories after the colonies have become strong enough to do good work above. Onondaga Co., N. Y.

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California Bee-Keeping—Past and Future

BY C. W. DAYTON

OUR long season of anxiety is ended. The bees began to make their own living the first of April. We began to feed them on the first day of last July, making it a nine months' dearth of honey. Still, all along through July and August they continued to get a small amount of honey from sumac and wild buckwheat. Some of the most industrious colonies got enough, perhaps, to keep them alive, but the general class of colonies went right down to starvation condition. At the start there were about 210 colonies. Now there are probably 160 left, about 50 having dwindled out from having too old queens or none at all. Some did not rear enough young bees last September, and the old bees continued to fly out of their hives all the fall and winter, of course causing the hives to become depopulated from old age of working bees.

During this time we fed about 3000 pounds of honey, nearly all in the open air. The next apiary north fed $35 worth of sugar to 220 colonies. There are 90 alive now. The next apiary south, of 250 colonies, fed 600 pounds of honey. There are 80 colonies alive now. The mortality among the colonies has been greater than usual for dry years. I do not know whether it is because the bee-men are losing courage, or because it was a worse case than usual. One thing, last season the sage utterly failed to bloom—something I never heard of before. It has always yielded somewhat. But the sumac and buckwheat held out exceedingly well. Sumac continued for something like six weeks, while I have known it in good years to dry up and fail in 10 days of hot weather. But last season held out cool and favorable. I have known buckthorn to yield honey early in the winter so as to fill the supers pretty well, but this time it almost failed to blossom and gave no honey at all, notwithstanding the abundance of moisture. Three years ago there came two inches of rain the second day of November, and in December the bees roared on the buckthorn bloom nearly equal to basswood. Neither did the eucalyptus yield anything in the valleys. In 1898, from eucalyptus, they completely filled their supers in January. Still there has been very mild weather all winter. Sometimes we have frosts and freezes often, and I have known a pretty heavy frost as late as May 5.

While this fine weather has failed to help us out with a yield of bee-feed from some source, it has permitted the colonies which have been fed liberally, to make the greater strides in the way of brood-rearing. Since the middle of December we fed, every pleasant day, all they could carry to their hives. This caused them to rear brood during January and February to their utmost, so that the first of April finds the hives full of bees and all the combs full of brood. Usually the sage is ahead of the bees, but at the present time the bees are waiting for sage, which is just beginning to blossom, and every corolla-tube contains a small drop of nectar.

If the price of $10 a colony were offered it would be no temptation to us to sell bees. They have never failed to yield 200 pounds to the colony in such seasons as the present. We count 200 pounds of honey worth $16, and sometimes it brings $18 for the first quality, according to how it is marketed.

The 50 colonies which have died I think might have been saved had they had better attention. That is, by feeding them in the hives, specially last August, to make them rear the required amount of young bees, and then to keep them supplied with stores in the early part of the winter. Colonies having old or poor queens do not seem to have energy to carry feed. Yet if they are kept until spring they would build up into good working colonies, and could be requeened for the season with queen-cells from some of the most forward colonies.

The 50 colonies at 200 pounds each would gather five tons of honey, which, at 8 cents per pound, would amount to $800. I do not think it would have cost more than $50 in labor to have saved that amount. But we tried one of the "short cuts" by open-air feeding. It required only to heat up a can of honey, mix with water and put it out in pans, where the bees could take it.

In 1896 I had 225 colonies to take through a dry year just like this, and not one was lost. But they were fed in the hives. In the spring I sold 75 colonies for $250. I gave the purchasers their choice out of the apiary and they took the strongest, of course. The apiary averaged 225 pounds to the colony that season. But we sold honey at 5 cents per pound then. Since then we have made a market, and there is no question but that we shall get 8 cents for all of the first grade and 7 cents for amber. This is not a high price, nor yet a low price. It is a price that we as producers and the consumers can afford. If extracted honey is held at 10 or 12 cents a pound it becomes a luxury—to look at, for company, or for some special occasion. Then it comes in competition with candies and other fancy, nonsensical trash which is only calculated to tempt the sight and palate. Then if it is sold at 3 to 5 cents per pound there is not much remaining above the cost of production. It has often been stated that it costs about 4 cents per pound to produce extracted honey. By an unusually good harvest, by buying the colonies at a low price of some one who does not know what they ought to be worth, or by the employment of cheap help, or by taking all the bees gather and allowing them to starve, the cost-price of honey may sometimes be cut down a cent or two per pound lower than that; but to the one who is keeping bees from year to year such methods do not pay. A person will have to wait and watch for such opportunities. And then they may not appear, and he is compelled to maintain himself two or three years without an income, or until his means are all used up. The only sure way is to get into "the game" and stay in it. Those that stay in it are always in practice, or, as we may say, "in training." Those are the ones who are best prepared to endure the hard "tugs." And the bee-man who brought his bees through such seasons as the one just passed does not need to look for employment or await an opportunity.

It is simply a matter of "keeping the shoulder at the wheel." The main force that enables one to stay at the "wheel" is love for the business. With the more "ups and downs" and "hard knocks" there come, and success at last, unwavering confidence is established or increased; and we should then set out to contrive methods to be conveyed over such times easily, or by the least amount of interruption when they occur in the future.

One fault of our management a year ago, just previous to the scarcity of honey, was allowing the colonies to breed up so as to contain a large force of bees which could be of no use. This was done at the expense of their abundant supply of winter stores, which was left in the hives from the previous good season. If the queens could have been restricted to two or three brood-combs there would have been enough young bees reared for all needs, and besides would have saved the laying capacities of the queens. If the queens had been prevented from exhausting their egg-laying disposition in the spring, they might have kept up more brood-rearing in September and October, and produced more late-reared bees, which were so much needed to go through the past winter and spring. The queens would have possessed better vitality, also, which exerts a corresponding influence on the worker-bees, resulting in the colonies being more tenacious of existence and the appropriation of feed. The useless bees reared a year ago would be of high value now, but our hives were not so constructed as to permit of such transposition, at least, "on short notice." It was known that there could be no honey for them to gather. Some persons suggested that bees know when, and when not, to rear their brood. So we allowed them to follow their natural instincts. Another time we intend to inject some intelligence into their methods.

In the eastern and northern States, when colonies are taken from the cellar there are often hives full of bees. The cold, backward weather during the last of April and in May, and the first half of June, often reduces the strong colonies to mere handfuls of bees through spring dwindling. Often in a couple of weeks after the bees are put out they will have three or four combs of brood, and with pleasant, warm weather, with maples and fruit and dandelions yielding pollen and honey, the bee-keeper will be led to think that they will soon be swarming and the colonies increased and his business fairly boom.

But there comes a day with a bright, sunny morn. Clouds by 11 or 12 o'clock. Rain, sleet, or possibly snow, by 4 o'clock in the afternoon, and during the night perhaps the formation of half an inch of ice by the next morning. Our balmy, sunny May weather seems to catch a cold that it can not throw off. All the spring flowers receive a set-back which often "puts them out of business" for the remainder of the season. The weather continues more or less cloudy or chilly, and what becomes of the tender brood in the hives? In a week or 10 days we examine and find, in place of the broad sheets of brood with eggs and all-sized larvæ strewn in strips several inches wide clear to the outer margins, a few patches of sealed brood the size of a hand or smaller. The eggs and larvæ have disappeared from the outside, and there may be only now and then an egg placed in the occasional empty cells among the sealed brood. Indeed, the prospects look slim, or "blue."

If such colonies as were taken from the cellar were set down here in California in any of the winter months, I believe there would be 6 or 7 combs full of brood in 3 or 4 weeks, and the weather would not prevent it from hatching. But our colonies in January are weak—not able to maintain more than 2 or 3 combs of brood. Thus through January, February and March they go through the process of "building up" to attain strength sufficient to swarm. The cause of their becoming weak is that they continue to fly about during September, October, November and December, and get to be old bees, or get lost. Then the weather is unpropitious enough to hold a weak colony in check, when, if the colony was strong in bees, it could make rapid advance from the start. Such colonies would be too early for sage or any other harvest, but the number could be increased, young queens reared, etc., in short, about double the gathering force of the apiary, or reduce one-half the number of colonies to be carried through a dry season.

Los Angeles Co., Calif., April 10.

Convention Proceedings

Papers Read at the Minnesota Convention

Held at Minneapolis Dec. 7 and 8, 1904

INSURING BEES

The principal upon which insurance of all forms is based is not a subject for debate. It has been accepted after years of trial to be one of the best and cheapest known means of protection against accident, and nearly all possible kinds of losses are susceptible of protection through the agency of insurance. Prominent among the exceptions to this general rule is loss of capital invested in stock and fixtures of an apiary.

We know of no insurance company at the present time that will consider for a moment the proposition of issuing a policy on property of this kind. Why insurance companies assume this attitude towards this species of profitable investment of capital I shall not try to explain, but such is the present condition, and the proposition that confronts the owners of large apiaries, who wish to protect themselves against loss of their property by accident, is, How can we obtain insurance?

From the standpoint from which I view the subject I can see only one method that would be cheap, safe and desirable, viz.: Form a bee-keepers' mutual insurance company and put it in the hands of good, practical business men, who would be interested in the success of the company and the business it was created to protect.

This subject should be brought before the bee-keepers at their annual convention, and proper measures taken to organize a company and commence business.

By request, I offer the above suggestions, and hope action along the line indicated will be taken.

Kanabec Co., Minn. C. H. HARLAN.

BEE-KEEPING AS AN OCCUPATION

The occupation of the bee-keeper is a most interesting and unique one. There is no other business like it. The skillful manipulation of bees, whether for the production of honey or for the rearing of queens is an art of which the general public know but little. Surprisingly strange questions are asked us by people refined and educated, as well as by the unlettered.

The progress of the industry in this country has placed the occupation among the trades or professions, and like them must be learned by careful study and practice in order to pursue the business intelligently and successfully.

It is certainly more of an *art* than a trade, and must be classed among the skilled avocations of men and women. In many of the *trades* the hands may become so skillfully trained as to work automatically, and by the use of patterns sometimes the mind is used very little.

Not so with the pursuit of the bee-keeper. To be successful he must not only acquire a knowledge of bees, he must also acquire skill by practice, and with something of an inventive mind be on the alert for the different emergencies that are sure to confront him, and especially during the swarming season.

Here I am reminded that one season when I had been too busy to clip the wings of many of my queens, and the swarming season in all its commotion came on, I found some comfort in reading in Gleanings that at the "*Home of the Honey Bees*" they had also been too busy to clip the queens' wings. And while they had to climb tall trees in order to capture some of their swarms, I had only to pull up an evergreen tree on which most of my swarms clustered and carry it to the hive prepared for them and shake them down into it, then return the tree to the socket in the ground in time for the next swarm that would come out.

During a recent visit to New England I found but few bee-keepers even among the farmers. The old-style hive was generally still in use and the black bees, infested with millers, still predominated. I wondered that Langstroth's movable frames and the "A B C of Bee Culture" were not well enough known to be appreciated. I noticed the absence of white clover from the fields and pastures and roadsides. These conditions doubtless accounted for the fact that No. 2 and No. 3 comb honey was sold in the city at 25 cents per pound.

They are fortunate indeed who can learn the theory and practice of bee-keeping in some State Agricultural College, under such instruction as Prof. A. J. Cook gave in the State of Michigan, and perhaps is now giving in California. It seems to me that the Agricultural Colleges in the different States should consider bee-keeping important enough to be included in their course of study. When such instruction cannot be had it would be undoubtedly much to the advantage of the student or beginner to spend one or more seasons with some veteran in the business.

Yet most of us bee-keepers are probably self-made, and are still learning our lessons by experience, striving to know and do the important things essential to the highest success, eliminating the non-essential and trying to create or adopt the best system for use in our apiary.

But what a debt the student of to-day owes to those of the past who, like Huber, Langstroth, and others, have patiently observed the honey-bees at work in the field and in the hive, at various times and seasons, and experimented with them until they had found ways and means of managing these industrious and wise little servants.

If the Hebrew writer of the proverb "Go to the ant, thou sluggard" had been as well acquainted with the honey-bee as the ant, he would doubtless have said, "Go to the honey-bee, consider her ways, and be wise."

The most excellent periodicals published in the interests of bee-keeping are not only exceedingly helpful but are indispensable to all "up-to-date" bee-keepers. Those of us who are beginners in this industry owe our success thus far chiefly to the benefits we have received from the veterans of experience who have acquired their knowledge through the slow and sometimes costly course of years of experience, and who have freely furnished it to be printed for the benefit of others. The debt we owe them should be acknowledged, and our praise and honor bestowed upon them.

I have been interested to notice that the art of bee-keeping to most persons, as they learn it, becomes fascinating, and they grow enthusiastic in it. A common bond of sympathy is created extending even to strangers. One perhaps unusual illustration is furnished by a prominent bee-keeper whom you doubtless know by reputation, Mr. Henry Alley, of Massachusetts.

When at his home last summer he stated that the season before he sold a queen to a lady keeping bees in New York State. At the end of the season she wrote him that she was very well pleased with the queen; it had proved to be the best one she had. This started a correspondence between them so agreeable to both parties of threescore and more years of age, that a few days previous to my visit they were married, and I found them enjoying their honeymoon!

The Creator gave man dominion over all the creatures he had made, that they might serve mankind, and the man who is able to acquire that dominion, and use it in harmony with the law of their being, is served and benefited thereby.

We bee-keepers who understand much about the honey-bee, so wonderfully made and endowed with ability to draw for us such supreme sweetness from the tiny store-houses in which the delicious nectar is found, are able to understand more of the Divine thought and wisdom because it is beautifully shown in the life and mechanism of the honey-bees and their queen.

Our occupation, then, while being a means of sustenance, unlike some others which dwarf the mind and degrade man, tends to elevate manhood and womanhood to a higher plane of thought and life.

J. KIMBALL.

St. Louis Co., Minn.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

A New Book: "How to Keep Bees"

Such is the title of a new book by Anna Botsford Comstock, B. S. In the preface she says:

"When we began bee-keeping we found the wide range of information and varying methods given in the manuals confusing.......... For the sake of simplicity this volume is restricted to knowledge gained in practical experience in a small apiary."

That gives one the expectation of instruction, based mainly on practical experience, of just such character as one needs to begin the business, especially as the sub-title of the book reads, "A Handbook for the Use of Beginners," and the first word of the preface is, "This book has been prepared especially to meet the needs of the beginner in bee-keeping."

A somewhat careful reading of the first 40 pages, and a hasty glance through the rest of the book, hardly fulfills this expectation, rather giving one the impression that the knowledge of the author has been gained mainly through the writings of others, some of those writings being perhaps not as reliable as they might be. For example, on page 29: "In developing a queen the bees usually proceed as follows: They select the important egg, which differs in no wise from any other worker-egg, and destroying the partitions between its cell and two adjoining cells, give it more room." Bees do not "usually" select an egg from which to rear a queen, "the important egg" being found in a cell which needs no enlarging—a queen-cell, and not a worker-cell. Even in the exceptional case, when in a queenless colony the bees do make a selection, it is a larva, and not an egg, that is selected. Neither would any one who has actually watched the work of the bees say that there was any "destroying the partitions between its cell and two adjoining cells," for no such thing happens.

The work is written in charming style, its 228 pages being printed from beautifully clear type on paper of excellent quality, and it contains 31 full-page illustrations that are very beautiful. The general reader will find it interesting; but as a guide for the beginner it is not to be commended without reservation.

Capturing Swarms of Bees

In a recent number of the American Bee Journal I noted an inquiry in regard to the best way to capture swarms of bees, and the answer to same. I am tempted to give a little history of a "method" that was used with apparent success in this vicinity last season.

My husband is a bee-keeper, and we live on a hill. I say this that you may understand the story which follows:

A man came to the house of a near neighbor and asked the boy, "Does that fellow up on the hill keep bees?" Being told that he does, he said, "Well, I want to put up a box in one of your trees. I am going to get a swarm off of him, and I will give you half of the honey they make."

He put up the box with cross-pieces in it, and smeared it inside with a mixture of honey and sweet anise-oil, assuring the interested youth that he had known bees to desert their hives for a box with this oil in it.

Well, he got the bees, and, as we had good reason to believe, "off of" my husband. Also, he took good care to come in the night and replace the full box with an empty one, which also caught its swarm. I have heard, from reliable source, that this man had over 100 colonies last fall, which he destroyed to get the honey, which he sold, as of course he could afford to do, at a reduced price, thus further injuring honest bee-keepers.

I should like to have an opinion as to his theory that anise-oil will draw bees.

Also, have honest bee-keepers no redress in such a case?

I should add that the bee-keeping industry in our State has not yet reached the stage where apiarists do not consider the swarms of value. We had an extra-good season last year for both increase and honey. Our 17 colonies yielded an average of 80 sections of honey each, and increased to 36 colonies, only 5 of which proved too weak to winter successfully on the summer stands.

NEBRASKA.

Saline Co., Nebr., May 11.

It is a popular belief that bees are attracted by odors, and especially the odor of anise. There is very likely some ground for this belief, although bees are certainly attracted by sight as well as smell; for a bee may sometimes be seen making a hasty visit to a flower which has just been rifled of its sweets, a still stronger proof lying in the fact that if an artificial flower closely resembling the flowers upon which bees are working be placed among the real flowers, the bees will also call upon the artificial flower. Admitting that the odor of anise attracts bees, it does not follow that it would make any difference as to deciding upon a place for the lodgment of a swarm, for the search of food is one thing and the search of a home quite another thing.

The placing of a comfortable hive or box in a convenient location is, however, no small temptation, it being not so very rare an occurrence for a fugitive swarm to locate in an empty hive, even when that hive has not been placed with any view of its offering attractions to prospective house-hunters.

There is no law against putting empty hives or boxes where swarms may find them; but our Nebraska sister may without great difficulty make her bees proof against the blandishments of all and sundry empty hives and boxes. One way is to keep close watch for swarms and hive them when they issue. For a swarm will not issue and immediately go to its new abode. It will settle and remain clustered for some time on some tree or other object, apparently with the distinct purpose of allowing the owner time to house it before it sails away to parts unknown.

A better way is to have all laying queens clipped. Then when a swarm issues it will return, and the owner will have a second, or even a third opportunity to see the swarm when it issues. An afterswarm will be prevented by the well-known plan of putting the prime swarm on the old stand with the old hive close beside it, and moving the old hive to a new location a week later.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B. Rural, Toledo, Ohio.

PLACING SECTIONS IN THE SUPER.

I'm all torn up in mind again, Dr. Miller. On page 329 you say sections look better when so given to the bees that the lock corner is the bottom corner. Wish you had been a little more explicit as to the *why* of that. In setting starters in sections I take a little pains to have the locked corner at the top. Sections filled in that position are much less liable to be pulled apart in handling—a consideration which weighs quite a bit with me. Both in pile and in case I want a section to stand the other side up from what it did while being built. I wish this because along the top-bar the honey is pretty sure to be plumped out fuller than along the bottom-bar; and finger bruises would start little leaks else. Also there are sections that will jar loose from the wood unless bottom side up. And when the honey-yield is poor (a common state of things with me) some sections are not attached to the bottom at all, and lots of them only attached an inch or so at one side of bottom. These last would keep me in an exasperated frame of mind while handling honey did I follow Dr. Miller's way. My Hasty jerk tears 'em loose—starts a big leak instead of a finger-bruise leak. The bees (just to pester me, and set a trap for me) won't propolize a lock in a way to improve the holding of it much. The only safety is to have well-attached comb both sides of the lock; and if the lock is placed at the top I can be tolerably sure of this.

CLIPPING QUEENS AND HUMAN SCENT.

R. L. McColley is all right to clip his queens so as to keep them from getting the scent of his fingers. That sometimes is quite an important little item. But he still exposes them to the scent of his *thumb*. Can't he improve his machinery and obviate that also? Or has he discovered that the human thumb is non-odorous? There, now! I've always wondered why little Jack Horner inserted thumb instead of finger in the pie! Page 330.

SOWING ALSIKE CLOVER SEED.

I think R. A. Morgan is right that alsike clover is the best honey-plant to push. Farmers can be induced to sow it—but it's no use to ask them to sow white clover. Page 331.

A NEW FORM OF BEE-HAT.

Shouldn't wonder if A. L. Oliver's form of bee-hat would be liked by many—especially by those who have not become habituated yet to any other kind. (Tobacco-pail cover with screen tacked all around it; and then the head, hat and all, butted into a suitable hole in said cover.) Be a great success if all the "butting in" folks adopt it. Page 334.

EVOLUTION OF BEES.

Great is evolution! And how the bee of the newspapers does evolute! Talk of three genera for the bee—here comes a fourth genus already! Room for *Sanctumapis meliphobia!* And the leading characteristic of the new bee is great aversion to, and terror at, the sight of flowers and the smell of nectar. Page 339.

EDITING A BEE-PAPER AT LONG RANGE.

For an editor to conduct a leading magazine in England and live in California at the same time seems quite curious. The Yankee proverb, "Some things can be done as well as others," hath British followers as well as American. Page 340.

CONSTITUTIONAL VIGOR OF BEES.

So Arthur C. Miller thinks there has been a decline in the constitutional vigor of our bees as a lot—to take them as they run. Some things do look a little like it. And he thinks transferring larvæ, and too constant feeding of candy to nursery queens responsible in part. His proof of this is not altogether convincing (to breeders, at least), but it is worth thinking of. I fear some seeming evidences of decline might be picked up in regions where never an artificially reared queen has been introduced since Samson took the honey from his "frame hive." Also I incline to say that Mr. M. and others exaggerate somewhat the depressing effects of old-style bee-keeping. The light colonies that were spared to continue the apiary were largely second swarms with excellent young queens, not decadents. And some at least of the heavy ones chosen to take up were heavy because the queen had recently begun to lose her fecundity from age. Page 241.

EZERA THRASHER AND HIS BEE-FEVER.

And Ezera Thrasher, who mourned the postoffice which the rural route wiped out, and looked to the big bee-association to protect him against stings, some of us will regret that his bee-fever got well so soon. If Manda had only been a B.-K. Sister, now, he would have seen some chance to rest up. Watching for swarms may be made a good rest-up job, if one doesn't have to do something else while watching—vile scheme to distract the watcher's attention, and let the swarm get away. Page 342.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to Dr. C. C. Miller, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Prevention of Swarming—Transferring Bees

1. I have 2 colonies of bees in common box-hives which have already sent forth one swarm apiece to the present date (May 15). I would like to let them swarm again, and then stop them from swarming any more. As they are strong colonies I fear that they may swarm as often as 3 or 4 times. Advise me how to use them to the best advantage.

2. I would like to get them out of the old box if such a thing can be done.

Washington.

Answers.—1. As I understand it, a colony has sent out a prime swarm, and you desire to prevent its sending out more than one after-swarm. When the second swarm (which is the first after-swarm) issues, hive the swarm and put it on the stand of the mother colony, setting the latter in a new place. That will prevent further swarming.

2. Twenty-one days after the issue of the prime swarm, drum out all the bees, put them in a new hive with frames filled with foundation, or with starters, then break up the old hive and get what honey and wax you can from the old combs.

* * *

Best Hive-Entrance—Bees Dying

1. Regarding the quotation from Swarthmore (page 356) as to the auger-hole being the best hive-entrance, I wish to say I bored a 2-inch hole in the front end of several hives, put a button over each, and opened them during the honey-flow, but my bees did not use them much. It might work better if I turned the hole to the back end, which I now intend to do.

2. Some of my colonies died mysteriously last winter, with plenty of honey and a large number of young bees. I should like to know the cause. So far my theory seems to indicate that they were clustered over combs of bee-bread when the long cold spell caught them. Is there anything in it? In a divisible brood-chamber I think the bees would not have died. We are in Southern Nebraska.

Nebraska.

Answers.—1. Bees are creatures of habit, and it is not easy to get them to change their place of entrance. If you had given the auger-hole first, and opened the other entrance later, they would have stuck to the auger-hole. You'll probably not do any better with the auger-hole at the back—I think not so well. For several years I gave my bees an opening at the back for the sake of ventilation at the time of putting on supers, and they didn't use it as an entrance.

2. The presence of pollen probably did no harm; the harm came from the lack of honey. They ate all the honey in reach; then the cold held on so long that before they could get to the honey in the other frames they starved. I doubt that a divisible brood-chamber would have saved them; although under certain conditions it might.

* * *

Canadians and Americans

On page 329 you say that Mr. McEvoy is a Canadian, but not an American. It may have been the custom in the States to give the name to no one but a United Stateser, but it is only the custom among the lower classes, and is purely an expression of provincial egoism. We Canadians are proud of our name, and have no desire to steal the name of another country. Can you say the same? By styling yourselves as "Americans" you take credit for the good works of all America. Look out and see that some day we will be refusing to annex the States.

Canada.

Answer.—As already said on page 329, "There may be a certain inconsistency....in saying that a Canadian is not an American, but established custom controls." The feeling "in this locality" is one of such brotherly kindness toward the bee-keepers of Can-

QUEENS

We have secured the services of one of the best Queen specialists in the U. S. Over 20 years' experience rearing Queens. Our Yard is stocked with select breeders from the best yards in America, and can send Queens by return mail.

Prices to Sept. 1, 1905:

Untested Queens ....$ .75
Select Untested Queens 1.00
Tested Queens.............. 1.50
Select Tested Queens....... 2.50

GRIGGS BROS,
521 Monroe Street,
TOLEDO, - OHIO.

Please mention Bee Journal when writing

Place Your Orders Now.

ITALIAN QUEENS

EITHER GOLDEN OR HONEY QUEENS

Our Goldens will come up to any other Golden Strain. Our Honey Queens are what some term "Red Clover Queens." We always call them Honey Queens.

Before July 1.	1	6	12
Untested	$1.00	$ 5.00	$ 9.00
Warranted Tested	1.25	7.00	13 00
Tested	1.50		
Select Tested	2.00		
Breeders from $5 up.	1	6	12
2-frame Nucleus (no Queen)	2.50	14.00	25.00

When Queens are wanted with Nuclei add price of any Queen wanted. We guarantee safe arrival of all Queens and Nuclei. Our breeders may be returned after 30 days, if satisfaction is not given. Cash must come with all orders. Orders are booked and filled in rotation. We book orders for next season. Safe arrival guaranteed of all stock. We ask a trial order.

D. J. BLOCHER PEARL CITY, ILL.

☞ Do not send personal checks unless you add 10 cents for collection. 16Etf

Please mention Bee Journal when writing

What Adel Bees Do

E. Milton, Mass., May 27, 1905.
Send me queen same strain as the one sent 1904. That queen proved the best queen I ever received. Her bees filled a super before May 15, 1905. Robt. Forbes.

All Tested Queens are $1 each.

HENRY ALLEY, Wenham, Mass.

Please mention Bee Journal when writing

WANTED

Young man, single, experienced with bees, possessing large stock of bee-appliances, etc., desires interest in established apiary in first-class Eastern locality, New York State preferred. Correspondence solicited from all parts. Address, M,
Care American Bee Journal,
24Alt 334 Dearborn St., Chicago, Ill.

BEE-KEEPERS' SUPPLIES.
We are now able to quote lower prices than ever before. Highest quality guaranteed. We handle the G. B. Lewis Co's goods. Italian Bees for sale in dovetailed hives. Send for my 88-page Catalog, and leaflet for beginners. They are free.
44Etf W. J. McCarty, Emmetsburg, Iowa.

BEST BEE-SUPPLIES

Lewis' Goods at Factory Prices.

Root's Smokers and Extractors, Dadant's Comb Foundation, Bingham Smokers.

Dovetailed hives with the famous COLORADO COVER. The best cover ever put on a bee-hive. Hives (if entirely complete) cost you no more with this cover than with other covers, but they are far better. WHERE DO YOU LIVE? We will quote you a price with freight paid to your station if you send us your list of what you intend to buy. We ship goods each year into every State east of the Rocky Mountains; let us ship to you.

A PORTER BEE-ESCAPE FREE WITH FIRST ORDER IF YOU say where you saw this ad. 88-page Catalog free. Send for one at once.

C. M. SCOTT & CO., 1001 E. Wash St. Indianapolis, Ind.

Please mention Bee Journal when writing

A Standard-Bred Italian Queen-Bee Free!

For Sending One New Subscriber.

As has been our custom heretofore we offer to mail a fine, Untested Italian Queen to the person who complies with the following conditions, all of which must be strictly followed:

1. The sender of a new subscriber must have his or her own subscription **paid in advance** at least to the end of this year

2. Sending your own name with the $1.00 for the Bee Journal will not entitle **you** to a Queen as a premium. The sender must be already a paid-in-advance subscriber as above, and the new subscriber must be a NEW subscriber; which means, further, that the new subscriber has never had the Bee Journal regularly, or at least not for a whole year previous to his name being sent in as a new one; and, also, the new subscriber must not be a member of the same family where the Bee Journal is already being taken.

We think we have made the foregoing sufficiently plain so that no error need be made. Our Premium Queens are too valuable to throw away—they must be **earned** in a legitimate way. They are worth working for.

We will book the orders as they come in and the Queens will be mailed

Will you have one or more?

If you cannot get a new subscriber, and want one of these Queens, we will send the American Bee Journal a year and the Queen—both for only $1.50. Address,

GEORGE W. YORK & CO., CHICAGO, ILL.

We are...... Manufacturers of Bee-Keepers' Supplies

SPECIAL!

Closing out a large quantity of No. 2 SECTIONS as long as they last, at $3.50 per thousand.

Write for Catalog.

MONDENG MFG. CO.,

147 and 149 Cedar Lake Road, MINNEAPOLIS, MINN.

Atf Please mention Bee Journal when writing.

ada that it would be a real pleasure to apologize for having used the word "American" as applying only to the inhabitants of the United States, with the promise never to offend in like manner again, if thereby "established custom" could be changed.

You say, "It may have been the custom in the States....but it is only the custom among the lower classes." I do not know just what opportunity you may have had for observation in the States, but I may be allowed to say that with the exception of a very few delightful days spent in Canada, my whole life—not a very short one—has been spent in the States, and I have been privileged to meet some of the best and most intelligent in the land as well as those of the lower classes, and I have not found that the use of the word "American" as applied to people of the United States was confined to the latter.

In any case I suppose that you will agree with me that we shall not go astray if we follow the lead of a good dictionary. The Standard dictionary is a work in good repute—among the upper classes of the States—between you and me I'm not sure I know just what upper classes are—it also stands well in England, and I suppose in Canada. It gives 3 definitions for the noun "American." The second is, "Any native or inhabitant of the American continent, whether aboriginal or descended from European settlers." In that sense Mr. McEvoy is an American. The third definition is: "One of the aborigines of the American continent." Mr. McEvoy doesn't look like an American of that kind. But the first definition, which in that dictionary gives the most common meaning of the word, reads thus: "A native or legally constituted citizen of the United States." Surely Mr. McEvoy is not an American in that sense, the common sense of the word.

While feeling obliged to defend my use of the word "American," I may be allowed to say that if I had known it would give you offense I should have chosen some other word for illustration on page 329, and shall have a reckoning with "A Reader" for having drawn me so near the vortex. But I make no apology to Mr. McEvoy. I think he so thoroughly understands my kindly feelings toward him that if I should call him a thief he would shake himself and laugh in that funny way of his, and say, "Well, they must have some new meaning over in the States for the word 'thief,' for I'm sure that so good a friend of mine as Dr. Miller would never apply it to me in any other than a complimentary way."

Extracting-Combs—Cover for Sections—Using Combs in which Bees Died—Bi-Sulphide of Carbon

1. Can good extracting-combs be built in Hoffman wired brood-frames, from 2-inch starters of medium brood foundation?

2. Will they stand extracting as well as combs built from full sheets?

3. In running for comb honey do you use an oil-cloth or the underside of the cover next to the sections?

4. What can be done with combs in which bees have died during the winter, and crawled into the cells?

5. In using bi-sulphide of carbon for killing moths in brood-combs, how much should be used to the cubic foot of space?

ILLINOIS.

ANSWERS.—1. Yes.

2. No; and for two reasons. Most of the comb will be built without any foundation, and the septum of natural comb is more tender and thinner than that in foundation. Also, the wires in this natural comb will not be all in the septum as will be the wires in full sheets of foundation.

3. The cover is directly over the sections, with a bee-space of air between the cover and the tops of sections.

4. Give them to the bees as soon as convenient.

5. Perhaps an ounce.

Please mention Bee Journal when writing Advertisers.

Reports and Experiences

Bees Wintered Well in the Cellar

Bees are doing well. No swarms yet. I had no winter loss at all. I tried cellar wintering for the first time, and those wintered in the cellar are in better condition than those wintered outdoors, although I had the strongest colonies outside. HERMAN HEURKENS.

Brown Co., Wis., May 30.

Hans Bloomenstine Und Bees

I see by de American Bee Shournal dat our colored brudder (Jeems Schmidt) vas done wrode somedings for de Bee Shournal. Now I dinks berhaps maybe I can do dot too. I made my first acquaintance mit de honey-bee aboudt 30 years ago alreatty, und dink I know whereof I am shpeaking aboudt, don't id, you know? If you dond't know den I dells you. You see id come aboudt dis way. I vas vonce a leetle dutch poy, und like all poys I had a grandfadder, und he vas dutch also, und he had some bees. I dond't know odder if dey vas dutch or Idalian or plack bees like our brudder Schmidt, but I do know

HONEY-JARS.

For a limited time we offer No.25 Honey-Jars, porcelain cover, metal screw cap, holding one pound of honey net, one gross in case complete in 5-gross lots, $4.00 per gross; less quantities, $4.50 per gross, f.o.b. New York. If you want to secure some, let us know at once.

HILDRETH & SEGELKEN,
265 & 267 GREENWICH ST., NEW YORK, N. Y.
11Atf Please mention the Bee Journal.

BLACK BREASTED RED GAMES—"The KING of Poultry." Large size, good layers of finest eggs. Hardy and fearless, the best all purpose fowl. Willow legs and Bay eyes. Illustrated circular. 25th year. **H. H. FLICK, MANCHESTER, MD.**

☞ The most attractive eastern excursion during the coming summer will be to Asbury Park, N. J., on occasion of the annual meeting of National Educational Association, July 3 to 7, inclusive, via the Nickel Plate Road and its connections, either the West Shore or Lackawanna Road, with privilege of stop-over at Chautauqua Lake points, Niagara Falls and New York City. Rate, $21.35 for the round-trip. Dates of sale, June 29 and 30 and July 1 and 2, with extreme return limit of Aug. 31, by depositing ticket. Patrons of this route may have the choice of a ride over the most interesting mountain scenery in New York and Pennsylvania, and through the celebrated Delaware Water Gap, or through the beautiful Mohawk Valley and down the Hudson River, which also includes the privilege of a ride on day line boat on Hudson River, between Albany and New York City, in either direction, if desired. No excess fare charged on any train on Nickel Plate Road. Meals served in Nickel Plate dining cars, on American Club Meal Plan, ranging in price from 35c to $1.00; also a la carte. Chicago Depot, La Salle St. Station, corner Van Buren and La Salle Sts. City ticket offices, 111 Adams St. and Auditorium Annex.

For further particulars, address John Y. Calahan, General Agent, 113 Adams St., Room 298, Chicago. 7—23A4t

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BEE-SUPPLIES

Root's Goods at Root's Prices

Everything used by Bee-Keepers.
POUDER'S HONEY-JARS. Prompt Service.
Low Freight Rates. ∴ ∴ ∴ **Catalog Free.**

Hoosier Strain Italian Queen-Bees by Return Mail

Untested Queen	$ .75
Select Untested Queen	1.00
Tested Queen	1.00
Select Tested Queen	2.00
Select Breeding Queen	$5.00
Best Imported Queen	5.00
Fair Imported Queen	3.00

WALTER S. POUDER,
513-515 Massachusetts Ave., INDIANAPOLIS, IND.

$12.25 to Niagara Falls and Return via Nickel Plate Road, June 18, 19 and 20, with return limit of June 24, or by depositing ticket limit of July 14 may be obtained. Through vestibuled sleeping-cars. No excess fare charged on any train on the Nickel Plate Road. Meals served in Nickel Plate dining-cars, on American Club Meal Plan, ranging in price from 35 cents to $1.00; also a la carte. For further information, write John Y. Calahan, General Agent, 113 Adams St., Room 298, Chicago, Ill. Passenger Station at Chicago, corner Van Buren and La Salle Sts., on the Elevated Loop. Chicago City Ticket Offices, 111 Adams St. and Auditorium Annex. 10—23A2t

VIRGINIA QUEENS Italian Queens secured by a cross, and years of careful selection from red-clover queens and superior stock obtained from W. Z. Hutchinson. Untested queens, 75c; after June 15, 60c; tested queens, $1.00; after June 15, 75c; selected tested queens, $1 25; after June 15, $1.00. Write postal card for circular. **CHAS. KOEPPEN.**
17A26t FREDERICKSBURG, VA.

IN THE HEART OF MICHIGAN

Within a hundred miles of me are over ¾ of the bee-keepers of Michigan. I am on the Pere Marquette R.R., which completely covers this region. **Root's Goods, Factory Prices, Prompt Service, Low Freight.** Send for Catalog.

GEORGE E. HILTON,
15A12t **FREMONT, MICH.**

—ITALIAN—
Bees, Queens and Nuclei

Choice home-bred and imported stock. All queens reared in full colonies.

One untested queen	$ .90
One tested queen	1.10
One select tested queen	1.40
One breeding queen	2.20
One comb nucleus (no queen)	1.10

All grades ready to send by return mail.

Safe arrival guaranteed. For prices on quantities and description of each grade of Queens, send for free price-list. **J. L. STRONG.**
204 East Logan Street CLARINDA IOWA.
14Atf Please mention the Bee Journal.

Do You Need Queens? By Return Mail?

If so, we can fill your order with the best Queens that money can buy. Try our strain of 3-band Italians; they will not disappoint you with empty supers. Untested Queens, 75 cents; $8 per doz. Tested Queens, $1 each. Send for circular. **J. W. K. SHAW & CO.**
13Atf LOREAUVILLE, Iberia Par., LA.
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Save 1-4 on Sections

We are in the heart of the lumber district and do not have to pay excessive freight on the raw material. We manufacture all our own **SUPPLIES** in the most modern equipped plant, therefore can save you one-fourth the price. Our No. 2 Sections are equal to the average No. 1 Sections. You will agree with us when you receive a sample order.

Prompt shipment and satisfaction guaranteed.

JOHN DOLL & SON BEE-SUPPLIES
Power Building, MINNEAPOLIS, MINN.

Bee-Supplies!

Discount for Early Orders

We carry a large stock and greatest variety of everything needed in the Apiary, assuring BEST goods at the LOWEST prices, and prompt shipments. We want every bee-keeper to have our FREE ILLUSTRATED CATALOG, and read description of Alternating Hives, Massie Hives, etc. WRITE AT ONCE FOR CATALOG

AGENCIES.—Trester Supply Co., Lincoln, Neb.; Shugart & Ouren, Council Bluffs, Iowa; Fulton & Ford, Garden City, Kan.; I. H. Myers, Lamar, Colo.; Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex. **KRETCHMER MFG. CO., Red Oak, Iowa.**

Dittmer's Foundation is the Best.

Send for Catalog, Samples and Discounts, and judge for yourself. 1904 output, 50 percent increase over 1903.

Full line of SUPPLIES, wholesale and retail.

Working Wax into Foundation for Cash a Specialty.
E. GRAINGER & Co., Toronto, Ont., Sole Agents in Canada for Dittmer's Foundation.

GUS DITTMER, Augusta, Wis.

GOOD DISCOUNTS ON EARLY ORDERS

COMPLETE STOCK OF BEE SUPPLIES--LEWIS CO.'S AT FACTORY PRICES

MUTH SPECIAL HIVE THE BEST DOVE TAIL MADE

SEND FOR CATALOG.

WE ARE ALWAYS IN THE MARKET TO BUY HONEY--SUBMIT PRICE.

THE FRED W. MUTH CO.

51 WALNUT STREET, CINCINNATI, OHIO.

CAR-LOADS

of Lewis' B-Ware come to our city for distribution. We carry a large stock which enables us to make immediate deliveries. We invite your inquiries for prices, Catalog, etc.

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The Rietsche Press

Made of artificial stone. Practically indestructible, and giving entirely satisfactory results. Comb foundation made easily and quickly at less than half the cost of buying from the dealers. Price of Press, $1.50—cash with order. Address,

ADRIAN GETAZ,
44Atf KNOXVILLE, TENN.

☞ J. G. Goodner, of this State, writes me that he "prefers to pay $25 for a Rietsche Press than do without it."—A. G.

Please mention Bee Journal when writing.

Wisconsin Basswood Sections

And Prompt Shipments

Is what we are making for our customers.

— DOVETAILED HIVES AND SHIPPING-CASES —

We carry a full line of SUPPLIES. Ask for Catalog.

THE MARSHFIELD MANUFACTURING CO., Marshfield, Wis.

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G. B. Lewis Co's Goods at Factory Prices

We carry a most complete line of BEE-KEEPERS' SUPPLIES. Send for catalog. It's free. Foundation Cutter free with each order, if you state where you saw this ad.

13Atf **NORRIS & ANSPACH, Kenton, Ohio.**

dot I vone dime vent myself oudt to mine granfadder's vone varm tay in May und de bees was on de out-site of de hive oudt, (Now you see I don't vas know vat bees vas) und I dought dey vas big flies und I got me a shtick right avay qvick, und I thought I vould half some fun but, Donner und Blitzen! it vas de bees vot had some fun! I dells you I got ocquainted right avay, und I half fell in love alretty mit de little animals. I know vat bees are now.

I see dot de bee-men dalks so mooch aboudt de queen of de colony. Now I don't know mooch aboudt modern bee-keeping, but would'ent it be better in dis free country if you would said de Bresident of de colony? Und I also hear dem talking aboudt klipping de queen. Now do dey klip her like dey klip horses? Und ven dey shpeak aboudt foul brood do dey mean shicken brood? I vonct asked a man vone time vot kind of a hive vas best to keep bees in, und he said a bee-hive. Now vot do you dink about a man vot vould answer a shmart dutchman like I am in such

One-Piece Sections

"Columbia Brand"

Strictly High-Grade in Timber, Quality and Manufacture.

Prices on application.

COLUMBIA MFG. CO. ANTIGO, WIS.

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Queens! ITALIAN Queens!

By Return Mail

Queens from Root's Red Clover Stock and Golden Italian Queens, the best honey-gatherers in America. Untested, 50c each, or $6.00 per dozen. I guarantee safe delivery. Send your orders to

E. A. SIMMONS,
22Atf FORT DEPOSIT, ALA.

4 Largest Sizes Soot Burning

Never Go Out

And last from 5 to 21 years

BINGHAM Original Direct Draft CLEAN Bee Smokers

Pat'd 1878, '82, '92 & 1903

Tin 4-in. Smoke Engine $1.50. 3½-inch $1.10. 3-inch $1.00. 2½-inch 90c. 2-inch Wonder 65c—per mail.

Sent on receipt of price per mail.

T. F. BINGHAM, Farwell, Mich.

OTISVILLE, PA., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. FRED FODNER.

Please mention Bee Journal when writing

"DADANT'S FOUNDATION"
IT EXCELS.

WE GUARANTEE SATISFACTION.

BEE-SUPPLIES
OF ALL KINDS.

Beeswax Wanted at all Times.

DADANT & SONS, Hamilton, Ill.

IF YOU WANT
LEWIS' POPULAR BEE-SUPPLIES
BY RETURN FREIGHT OR EXPRESS, SEND TO

H. M. Arnd, Manager.

York Honey AND BEE SUPPLY Co.
141 & 143 Ontario Street, CHICAGO, ILL.
(5 short blocks north of the C. & N. W. Ry. Passenger Station, using the Wells St. Cable Line from center of city to Ontario St.)
Long Distance Telephone—North 1559
A FULL LINE OF BEE-SUPPLIES ON HAND
Consisting of Hives, Sections, Shipping-Cases—everything used by the practical, up-to-date bee-keeper.
Catalog and prices on Honey on application. If you want **Good Goods at Factory Prices and Prompt Shipment**, send your orders, or call on us.
BEESWAX WANTED—28c cash, or 30c when taking Bee-Supplies in exchange—delivered here.

DEATH TO LICE.

LOSS BY LICE
on poultry amounts to many times the cost of **Lambert's Death to Lice**—the sure preventive. Loss can be saved and profit made by its use. Frees sitting hens from lice without harming eggs or chicks. A trial 10c box will prove it. 100 oz., by express. $1.00.
O. K. STOCK FOOD CO.,
D. J. Lambert, Vice-Pres.
406 Monon Bldg., Chicago, Ill.

$21.35 to Asbury Park, N. J., $21.35 and return, via Nickel Plate Road. Tickets good via New York City. Dates of sale, June 29 and 30 and July 1 and 2, with extreme return limit of Aug. 31, by depositing ticket. Chicago City Ticket Offices, 111 Adams St. and Auditorium Annex. Depot, La Salle and Van Buren Sts., on Elevated Loop. 8—23A4t

a vay as dis? Und I also read aboudt a kind of Root dat grows In Ohio, dat is good for bees.

I vould like if Dr. Miller vould answer all dese questions und make all dese dings clear to me, und maype me und mein frow Katrina might join de National Sociation in a body. If dey is no color line maype dere is no nationality line. If dese questions are all answered maype I vill write again some dime und dell you all I know.

HANS BLOOMENSTINE.

Too Dry for Clover

Bees are doing poorly. It is very dry here—but little rain for two months. There will be no clover unless rain comes soon, nor will there be any hay. HENRY ALLEY.

Essex Co., Mass., June 6.

Getting Combs Cleaned of Pollen

Of the 180 colonies of bees packed for winter on the summer stands I have 140 left at this date, May 30. In overhauling the combs left by the 40 colonies of dead bees, I found many that were so full of pollen as to make them useless for brood-rearing or storing honey. When this discovery was made I searched the old files of bee-papers to find what Mr. Doolittle does with such combs. Since reading what he says on the subject I have found, by accident, a wholesale way of getting the combs cleared of pollen with but very little trouble.

Last summer a colony of bees became queenless, but I did not know it until I began packing them for winter. Then I found a good-sized colony with combs almost wholly filled with pollen, and was puzzled to know what disposition to make of the bees and combs. I finally concluded to place a strong colong with plenty of honey and a laying queen on top of the hive containing the queenless bees. They wintered well together and now make a strong colony for summer work. A few days ago I looked at those pollen-laden combs (9 of them) and I could not find a particle of pollen in any one of them. They were all as light and clean as new-made combs. EDWIN BEVINS.

Decatur Co., Iowa.

Poor Prospects for This Season

I have taken up bee-keeping for a living. So far I have had good success, but this spring is a failure. All over Texas bee-keepers seem to be having a hard time of it. I took an average of 133 pounds to the colony from 41 colonies, spring count, last year, but from present prospects I fear I will not get half that amount this year.

We had very cool weather 3 or 4 times in April. That stopped the flow of nectar. Bees don't find enough to build combs with.

OTTO SUELTENFUSS.

Bexar Co., Tex., May 30.

Too Much Swarming

I wintered 8 colonies of bees. They commenced swarming the last Sunday in April, and I have to date saved 12 swarms, but lost 3. I think they will swarm themselves to death.

Marion Co., Ill., May 29. J. A. HOYT.

Honey Famine in Tennessee

We have had a famine here among the bees for the past year. I have lost 40 or 50 colonies. I have had no surplus honey since 1903. Honey is light here this year, and I fear our honey crop will be a failure again. Bees are nearly all dead where they have had no attention. G. D. HAWK.

Sullivan Co., Tenn., May 29.

Bees Wintered Well—Building Up Fast

Bees wintered well here with no loss that I have heard of. It has been a good spring. Bees are building up fast, and will be in fine condition for white clover.

C. W. HOPSECGER.

Skagit Co., Wash., May 24.

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Honey and Beeswax

CHICAGO, June 7.—The volume of sales is infinitesimal; hence prices are not considered important at this season. Comb brings 12@12½c per pound for best grades, off lots 7@10c. Extracted, 5@7c, according to what it is. Beeswax sells upon arrival at 30c per pound.
R. A. BURNETT & CO.

CINCINNATI, June 2.—There is only a fair demand for honey at the present time. We quote amber extracted honey in barrels at 4¾@6c. according to quality. White clover extracted at 6½@8c. The comb honey market is practically closed for the summer. Beeswax, 29c.
THE FRED W. MUTH CO.

BOSTON, May 23.—Our honey market continues very dull, with very little movement to be noted. We quote fancy white at 14c; No. 1, 12½@13c. Extracted, from 6@8c, according to quality. BLAKE, SCOTT & LEE.

PHILADELPHIA, May 19.—The season is about over for the sale of comb honey, with so few sales that the market is not established enough to quote price. Extracted honey has met with some demand, and we quote as follows: White, 6@7c; amber, 5½@6c. Beeswax, 28c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

NEW YORK, April 19.—There is no change in the condition of the honey market. Very little comb honey selling and prices ruling about the same as our last quotations. Extracted in fair demand only. Beeswax firm at 30c.
HILDRETH & SEGELKEN.

KANSAS CITY, May 12.—The honey situation is a little stronger, and there is but little honey left in the hand of the dealers. Best honey bringing from $2.25 to $2.50 a case; amber at from 25@50c a case lower. Extracted, 4½@6c. Beeswax, 28c. C. C. CLEMONS & CO.

CINCINNATI, O., June 9.—There is no demand for comb honey on account of the warm weather. Extracted is in usual demand for this season of the year. We quote white clover at 7@8c; amber, in barrels, at 5¼@5½c; in cans, 5¾@6c. Beeswax, 28c. C. H. W. WEBER.

ALBANY, N.Y., Feb. 8.—Honey market dull this extreme cold weather, especially comb, which candies or granulates and cracks easily. We quote: Fancy white, 13@14c; No. 1, 12@13c; mixed, 10@11c; buckwheat, 10@11c. Extracted, better demand: Buckwheat, 6@6½c; white, 6@6½c. Buckwheat most in demand, as the Jewish people will have no other. Beeswax, 30@32c. H. R. WRIGHT.

SAN FRANCISCO, May 31.—White comb, 1-lb. sections, 11@12 cents; amber, 8@10c. Extracted, white, 5½@6 cents; light amber, 4@5c; amber, 3@3½c; dark amber, 2½@3c. Beeswax-good to choice, light, 27@29c; dark, 25@26c.

The ship Atlas, sailing Saturday last for New York, carried 236 cases extracted, reported to be Hawaiian Island product. Offerings of this year's California honey so far have not been large, and mainly by sample. The movement on local account is light.

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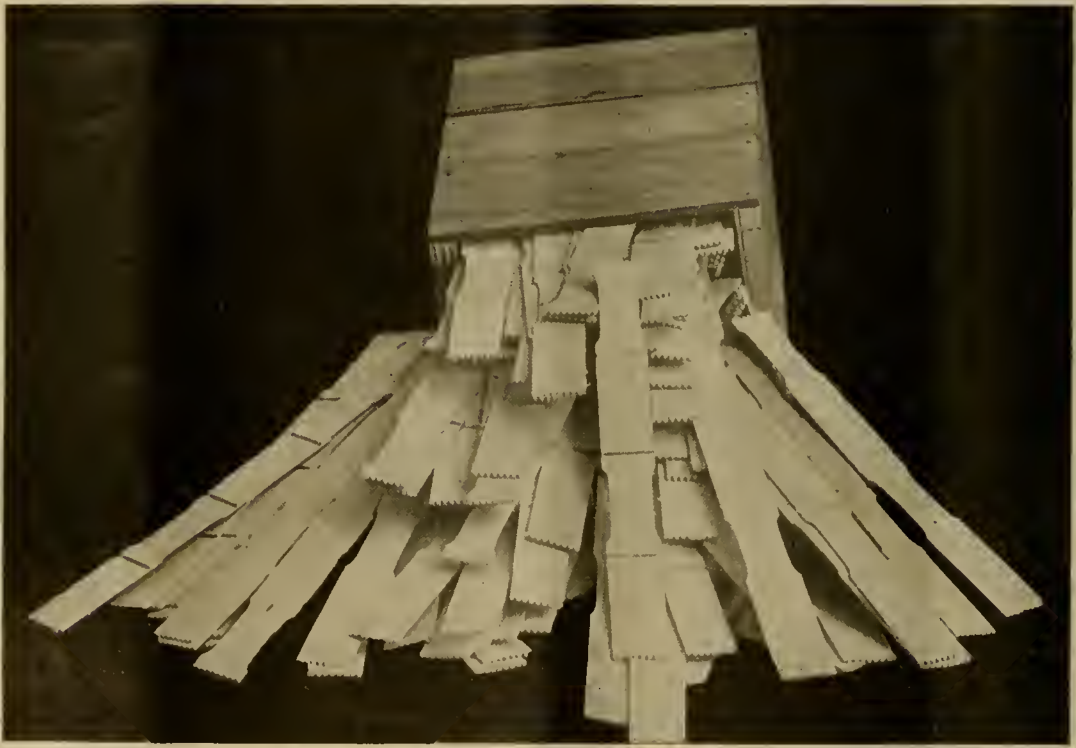

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By E. R. Root

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GEORGE W. YORK, Editor | CHICAGO, ILL., JUNE 22, 1905 | Vol. XLV—No. 25

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Editorial Notes and Comments

Hive-Ventilation During Harvest

A good many bee-keepers probably fail to get the benefit they might have from a sufficient amount of hive-ventilation during the time bees are storing. In many cases the hive-entrance is the same in July as it was in March. In March a strong colony may do with not more than one square inch for its entrance; but ten times that amount will be better when the harvest comes, partly because of the greater strength of the colony, and partly because of the greater heat of the surrounding atmosphere.

Those who run their bees for comb honey have perhaps no successful plan for giving ventilation except at the bottom of the hive, either by a large entrance or by raising the hive on blocks at each corner. But in running for extracted honey one need not be so careful where the cool air strikes, and can have an opening at the roof, perhaps by having the cover shoved forward so as to leave a space of 1/4 inch or more. That allows a passage of air clear through the hive. No need to worry if rain should beat into such an opening. This abundant ventilation will make the bees more comfortable, and in some cases—indeed, in many cases—may be the means of preventing swarming.

Probably not a few who read these lines would be the gainers to go at once and give the air a better chance to get into their hives. If fearful of the effect of too much fresh air, try it on a few colonies at least.

◆

Foul Brood and Extracted Honey

In an article in the Bee-Keepers' Review, Elmer Todd says:

> The principal causes why foul brood spreads faster in an extracting apiary, is due to extracting from combs containing brood, some of which is, occasionally, diseased, and then transferring such combs to healthy colonies. With such management, the extractor also becomes a source of contagion, and might disease a whole apiary if it were not cleaned after extracting, even one set of combs containing brood taken from a diseased colony.

But he has learned from experience that by using proper precautions, even in a badly infected district, one may work just as safely for extracted as for comb honey; and he gives the following instructions:

> Use a queen-excluding zinc between the upper and lower stories, thus confining the queen below, and extract from no comb from the lower story, or from any comb containing brood; also be careful, when filling the upper story for extracting, to use no combs taken from diseased or dead colonies, such as may contain the dried-down scales of the diseased. Do this, and foul brood can be as easily controlled as though the apiary were managed for comb honey.

Commenting on the article, Editor Hutchinson quotes Wm. McEvoy as saying repeatedly that clean, white combs from the super—combs that had never contained brood—were perfectly safe to use when emptied of honey and cleaned by the bees, and concludes by saying:

> Once we thought it necessary to burn up hives, bees, combs and honey—then, gradually, we began to learn to save first one thing, then another, and that honey in the supers is not contaminated may be the next thing we will learn.

◆

Doolittle and Pratt on Queen-Rearing

At a meeting of the British Bee-Keepers' Association, reported in the British Bee Journal, Mr. F. W. L. Sladen, after giving an outline of the "Swarthmore" process of queen-rearing, and giving Mr. Pratt credit for doing a good service to queen-rearing by introducing queen-cells mounted in wooden cups, related a comparison he had made, as follows:

> In July and August last year I carefully compared Pratt's method of rearing the

queens in a small cage in the top of a brood-comb, with the latest form of Doolittle's method of rearing them 4 or 5 inches from the top between combs of brood separated from the compartment containing the queen by a partition of queen-excluding zinc, by rearing queens by both methods at the same time in the same hive during a honey-flow, in my apiary. In both experiments Pratt's cage was placed in the top of the central comb of the brood-nest. I found that the pupæ in it were smaller, and weighed less than those reared by the Doolittle method. The queen-cells by the Doolittle method were large, broad, and pitted all over like good specimens of queen-cells produced naturally under the swarming impulse, while those in Pratt's cage were smaller and narrower, and their walls and cappings were thin and comparatively smooth. The amount of food left in the cells after feeding ceased was less in Pratt's cage, and as the pupæ developed into queens it did not grow hard so quickly.

I believe that these results were chiefly caused by the excluding-zinc, by which the queen-cells were closely surrounded, preventing the nurse-bees attending to the queen-cells and feeding the larvæ sufficiently, and also to some extent by the queen-cells being placed in the top of the brood-combs, the whole of the upper halves of which were outside the brood-nest (as they always are during the middle and latter part of the queen-rearing season, especially when there is no super on the hive), and were filled with honey, so that a large proportion of field-bees, and a smaller one of nurse-bees, were probably surrounding the queen-cells than if they had been in the brood-nest, and in cool weather the queen-cells, being separated from the brood-nest, would be liable to be chilled.

As the production of well-developed queens is of the first importance, I prefer the form of Doolittle's method above mentioned, and it is not more laborious; on the contrary, it is less so, for giving the queen-cups first to specially-obtained queenless and broodless bees is unnecessary. I find they can be given direct to the queen-rearing compartment of the colony in which they are to be finished, and, if this compartment contains only old brood, they will be accepted satisfactorily here by confining the bees in the compartment for a few hours through the insertion of a wire-cloth partition as by specially-obtained bees. Queens should always be reared inside the brood-nest between combs of brood, and the nurse-bees should have free access to the queen-cells.

◆

Storing Extracted Honey in Tanks

In the Thirtieth Annual Report of the Ontario Agricultural College and Experimental Farm at Guelph, the Lecturer on Apiculture, H. R. Rowsom, gives the following on storing extracted honey:

During the last two years I have been trying to discover the very cheapest and most profitable method of storing extracted honey. When a large amount of honey is to be stored it is found that the 60-pound cans generally used represent a large outlay, and unless sold quickly generally become dilapidated. Large tanks, such as are used for water, vinegar or pickles are expensive, and very much more so when they leak. Oak barrels are costly, and if granulated sugar is taken out of them it costs nearly as much to cooper a barrel together again as to buy a new one. I have been using rectangular tanks made of flooring, the ends and sides of which could be removed after the contents had granulated. Although they were well waxed they sometimes leaked at the corners.

This year [1904] I tried, with entire success, lining these tanks with manilla paper painted with hot paraffin wax. I experimented with dry goods packing cases lined with waxed manilla paper, and found these boxes absolutely proof against leaking.

To store honey in this way a box must be used, the interior of which is free from any projections which would cut the paper when pressed against the sides of the box. Then a full sheet of manilla paper is laid on the bottom of the box (completely covering it), and another sheet around the interior sides. Where the two ends of this sheet meet in one corner is nailed a carpet strip so as to cover both ends of the paper, and other pieces of carpet strip join the edges of the sheet on the interior sides to the one on the bottom. Manilla paper can be bought in sheets of any length, and 36 or 42 inches wide. Then the paper and carpet strips are painted over with hot wax, and wherever the paper is accidentally torn a small piece of shingle is nailed over the break and then covered with wax. This box makes the very cheapest means for storing extracted honey, and one that is perfectly safe.

Nearly all bee-keepers strain their extracted honey through cheese-cloth. This is a very slow process. The honey runs slowly, especially if it is not very warm, the cloths become clogged with minute particles of wax, and more or less honey is spilled in changing cloths. Others run their honey into tanks; and after the impurities have risen to the surface, they run the clear honey out of the bottom of the tanks. But this can not be done unless the honey is thin, either from heat or from not being sufficiently ripened. I have made this method very reliable by using a large tin storage-can placed out in the sun. The can is painted black so as to absorb heat more readily from the sun. The cover of the can is a wooden frame with glass top, sloping after the manner of a hot-bed sash or solar wax-extractor, and this glass is kept turned towards the sun. When the sun is strong, the honey becomes very warm, and the small particles of wax and other impurities come to the surface.

Miscellaneous News Items

The Washington Bee-Keepers' Association asked the Lewis & Clark Exposition managers for an appropriation of $7000 for collecting and preparing an apiarian exhibit at Portland, Oreg., this summer. We do not know whether or not they got it, but it showed that the State of Washington did not intend to be left behind in the bee-keeping line.

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Apiary of James McNeill.—Mr. McNeill says this about his apiary:

I send a picture of my home apiary with honey-house in the background. In 1880 I began my bee-keeping on this spot with 3 colonies bought from a neighbor. I have produced extracted honey almost exclusively. I have been fairly and uniformly successful, never having had a failure, nor can I record any large yields of honey.

I winter my bees on the summer stands packed with leaves. I started this spring with 170 colonies at this yard.

James McNeill.

◆

The San Antonio Convention of the National Bee-Keepers' Association is to be held Tuesday, Wednesday and Thursday, Oct. 31 and Nov. 1 and 2. Texas bee-keepers are planning great things for the convention. Their hospitality and entertainment of convention members promises to be as large and generous in extent as are the bounds of their big State. It will be their opportunity to set the pace for future conventions of bee-keepers. We hope the bee-keepers from all over the country will just "swarm" down on those Texas bee-rangers, and give them the "time of their lives" to "hive" the visitors.

◆

Honey Adulteration in Illinois.—We are indebted to Prof. E. N. Eaton, State Analyst of the Food Commission of Illinois, for a copy of their Fifth Annual Report for 1904. Referring to honey, we find this paragraph:

"The percentage of adulteration recorded in honey, 33 percent, hardly conveys a true idea of the condition of the market. The samples were few, and most of them suspected of adulteration. As a matter of fact, adulteration of honey with glucose, once so prevalent, has been practically driven from the markets."

Surely, the State Food Commission is a good thing, not only for honey-producers, but for all other honest producers of food products. But what the State Food Commissions need is "more power to their elbows" through the enactment of stringent laws against the adulteration of foods of all kinds. The importance of such laws, and the great need of the work the State Food Commissions are doing, are becoming more and more apparent to the public.

◆

Apiary of L. W. Elmore.—Mr. Elmore wrote us as follows when sending the picture:

I send a snap-shot of part of my apiary of 50 colonies, taken Feb. 4, 1905, after one of our heavy snow-storms. I winter my bees on the summer stands altogether, and have been very successful in wintering, although this spring I have lost several queens. Our fall honey didn't show up at all last fall, consequently a great many colonies, especially late ones, were short on winter rations, and have come up minus this spring. Some bee-keepers have had a heavy loss. My bees are doing well now (May 5). White clover is in abundance. We expect some honey in the near future. L. W. Elmore.

◆

Clover and Basswood Prospects are good in Wisconsin. So reports Inspector France, who generally knows all that's going on in that State along the apiarian line. He says there has been some delay in re-issuing his new commission as Inspector of Apiaries, and until he gets it he will be unable to answer the calls for him to go on with the work. So if there are any delays, those who have requested him to come and inspect their bees will now know the reason why. At least those who read the American Bee Journal will know. And, of course, *we* think *every* bee-keeper in Wisconsin, as well as elsewhere, should read the old American Bee Journal every week.

◆

Apiary of J. M. Mosteller.—Mr. Mosteller writes as follows:

I am sending a photograph of my apiary and family, so that others may see what North Carolina can do in bee-culture.

I started with the movable-frame hives just last year. The bees wintered well, and I have had 3 swarms so far (May 22). June is the principal swarming month here. Basswood, sourwood, and chestnut are the main honey-plants.

I have 60 colonies of bees, 4 of them Italians, and the rest blacks. I secured an Italian queen in May of last year, and now have the 4 Italian colonies.

North Carolina and northeastern Georgia are about as good a country as can be found for bees. J. M. Mosteller.

Contributed Special Articles

Making a Bee-Hat—Hiving Swarms

BY C. E. MEAD

EVERY one likes his own fixings. A hot bee-veil is as bad as being stung, for some folks.

Take a strip of *black* wire-cloth 6 or 7 inches wide, depending upon the length of your neck. Make a hoop of it that will just go around the outer rim of a straw hat. Sew the top edge of the wire-cloth to the edge of the brim of the hat. Sew a cylinder of mosquito-bar on the lower edge of the wire, and cut it out so it will fit over the shoulders. Bind the lower edge with cloth having some B B shot or gravel stones in the lower edge. Put it on and button your vest, and your face is safe and cool. Air will go through wire-cloth and not through veiling. You can see through black better than any other shade. To those who do not wear vests in hot weather, sew two pieces of tape to the back flap just where it will come under the arms, and tie over the front or breast-flap.

HIVING INACCESSIBLE SWARMS.

The first swarm I ever hived was in as bad a place as I ever saw. It was on the trunk of an apple-tree that had the top broken off by the wind, and the sprouts had grown on the trunk from 2½ inches thick and less. An old bee-keeper told me mashed burdock leaves wet were offensive to bees. So I took a butter firkin, holding about 5 gallons, and sprung sticks in, which were cut a little larger than the diameter. My companion sprung two of the largest of the sprouts apart and outward, and we put the firkin in against the trunk, then packed burdock leaves right behind the firkin and next to the trunk, so that the bees could not get in there. Then we made an oblique circle of burdock leaves around the trunk, the highest point meeting the packing between the firkin and the trunk. A few bees were put up in the firkin on a sprout, and then by the use of a burning rag on the opposite side from the firkin they were soon stampeded into it.

We carefully spread the sprouts and took the firkin, with a board under it, to the bee-house where we turned it head down, put two sticks on top, and set the hive on them, and let the bees run up into the hive.

You can put a light box or basket, open end down, on top of a limb that is too big to shake, and let the bees run up into that. Then hive to suit. With a branch that you can shake or jar the bees off by bumping, just hold a light box under it and then shake them into it, place the hive over the box, covering the surplus space with a board, and let them run up.

A good way is to put two empty hive-bodies where you wish to have the bees stay. Dump the bees into them and set the hive, with frames, on top of the two bodies, and put on the cover. Remove the two lower bodies in from 5 to 7 days afterward, and put on surplus room, if the season demands it. If the bees are the least bit cross, sprinkle them well with sweetened water. They do not care to sting with honey-sacs full.

Cook Co., Ill.

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What Is Honey?—Definitions Reviewed

BY DAVE S. DUNLOP

THE question, What is honey? is one with which chemists as chemists have no concern, and can have no authority. The question, What is honey? can be answered only by—1st, the naturalist or student of bee-life from a scientific standpoint; 2d, the man who deals in honey as a commercial product—bee-keeper, honey commission merchant; and 3d, the purchaser or consumer of honey—the average mortal.

Prof. Eaton, at the Chicago-Northwestern convention last December, said the Department of Agriculture had asked its chemists for a definition of honey. If this statement is exact, it is very surprising, and the Department of Agriculture is on entirely a wrong track. A chemist, as a chemist, has no more authority to define honey than he has to define water or to define milk. The chemist's work begins just after the definition of a thing has been made. His work is to discover constituent elements, component parts, their proportion and manner of combination. Water is not defined as H_2O, but H_2O is said to form water. The definition of water is settled by long usage, and the chemist merely says that in this thing defined as or called water he finds the constituent elements are hydrogen and oxygen in certain proportions combined in a certain manner. Where the water comes from, be it from clouds, the physical geographer and weather bureau are asked about the matter; if from artesian wells, then geologists are consulted about the earth's hidden strata. If it is to be used for manufacturing purposes, the manufacturer is consulted; if to be used as a beverage the physician is consulted. But the chemist is concerned, as a chemist, neither in the place nor manner of the origin of water except as it affects his calculations or instruments, nor is he concerned with its subsequent use at the time he analyzes it.

What is true of water is true of milk and everything else. The naturalist defines a mammal and its food secretion which he terms milk. This fluid having been defined by the naturalist, then, and not till then, does the chemist's work begin. He analyzes to see what this substance called milk consists of. What is true of water and milk and everything else is equally true of honey. The chemist has nothing to do with bees as a chemist. He has nothing to do with a honey-comb as a comb, for a comb is a physical not a chemical fact. He has nothing to do with flowers, nor with nectar of flowers, nor with sweet-leaf excretions, nor with plant-lice excretions, nor with a bee's manner of collecting nor manner of storing its food. These things are all in the biologists sphere of labor. The naturalists—the students of bee-life—deal with these matters. He, as a chemist, deals only with substances. Of course, the facts he discovers are very valuable, and aid our practical conduct of life, but this practical application of his knowledge is not to be confused with his laboratory analyses.

On page 13, are four definitions of honey. The first three, "Honey," "Comb Honey," "Extracted Honey," are all definitions with which a chemist as a chemist has no connection whatever. The naturalist, bee-keeper, honey dealer and consumer are the only persons with authority to define these three things. The fourth definition, entitled "Standard Honey," is apparently not honey as a whole, but only a certain kind of honey. Honey would be honey, and be "pure honey," even though it were or were not "standard honey." For their own laboratory use chemists can make as many different standards or chemical statements of differing grades of pure honey as their convenience may demand, and bee-keepers, nor honey consumers, nor naturalists, would be concerned in the least. But the first three definitions can not be allowed for one moment to be within the province of any analytical chemist. Therefore, are we to assail chemists for these definitions—errors? Is it not more likely that the first three definitions were given the Government Chemists, and they deduced therefrom the fourth statement, which is not a definition, and does not profess to be, but is merely a chemical description of a certain grade of honey?

The avicultural bureau, or the customs officials, or the food commissioners, must have made the original definitions of honey, and it is to these authorities rather than the Government Chemists, that criticism of errors should be made. Who gave the Bureau of Chemistry the definitions which they sent out? Let us learn this, then we will know to whom to write. A chemist, as a chemist, has no knowledge whatever of the fact that bees gather nectar from flowers. That fact is outside his scientific province, and he would have no authority whatever to use that fact in any statement as printed below the three definitions given.

As to the three definitions of honey, the third, which defines extracted honey, is the nearest to accuracy, but could be made to include more than its originator probably intended, or bee-keepers would allow under the term. The second, which defines comb honey, would include section honey, bulk honey, extracting-frame honey, and brood-frame honey, though usually only section honey is meant when the term "comb honey" is used. But the first definition of honey in general, which is supposed to include everything entitled to be called honey, is undoubtedly incorrect from the standpoint of the biological scientist, the honey consumer, the honey-dealer, or anybody else.

It is popularly understood, and has been from prehistoric times to the present day, that honey is the stored natural food of adult bees, whether its flavor were sweet or spoiled, whether it was wholesome or poisonous, whether it was white or yellow, or purple. It has always been understood that there were various grades of honey, good, fair, and bad. But so long as it was a natural product uninterfered with by man or other disturbing factor; so long as it was just as the bees stored it, it was pure honey even though only fit to be made into honey-vinegar. Milk is pure milk no matter if in spring the cows do eat wild garlic. The quality of the milk may vary with the cow's food and health. But it is still pure milk so long as some other secretion of the cow, such as blood, etc., is not mixed with the milk; and the bee's secretion (chemically changed nectar from any source) is still pure honey no matter whether gathered from fruit-juices, a neighboring farmer's kitchen, or elsewhere.

A natural product may have many grades of various qualities, but a natural product so long as it is left in its natural state can never be called adulterated. Adulteration, for which a man can be punished, is a condition which the man produced, not a condition which a bee produced. A man may be forbidden by food commissioners (on the advice of boards of health) to sell certain grades of honey, not because they are not pure honey, but because they are unhealthy grades of honey, just as a milkman can be forbidden to sell milk of a cow just delivered of a calf, because of its undesirable effects, but not because it is not pure milk. Milk with germs in is also bad, but that is not a chemical impurity, originally at least. It must have the germs added after leaving the cow. Germs added to honey after the bee stored it would also be an impurity. But in its pristine condition, after being ejected from the bee's sacs into the cell, the honey is pure honey no matter where the bee got her supply of liquid sweet which in her foraging she collected. Any definition of honey must be this broad to be true natural history; and any definition of adulterated honey must include some addition or unnatural modification of this natural product.

The stored natural food of adult bees is undoubtedly honey, no matter where the bee secured its food. If the health boards deem honey-dew an unhealthful source of honey, they may recommend that food commissioners forbid the sale of honey-dew honey, but this is because it is unwholesome honey, not because it is not honey, just as the sale of a badly sprouted potato should not be allowed, not because it is not a potato, but because it is an unwholesome potato.

Honey is the natural, viscid, sweet substance stored by bees for food. It has varying flavors, colors, and qualities, and if the writer understands aright, not always exactly the same chemical make-up. But so long as it is the latter, uninterfered with natural substance, taken by the bee out of her honey-sac, and by her stored in a cell of a bee-comb for the future food of adult bees, or to be later mixed with pollen for young bees, then it is, in the bee's estimation, honey—pure honey. What the bee classes as pure honey, it has heretofore been the custom from Jonathan's day and before down till now, for all mankind to call honey. To make a new definition would be arbitrary. Neither naturalist, consumer, bee, nor bee-keeper is calling for a new definition of honey. Let us keep the old one.

Putnam Co., Ind.

Saving Weak Colonies—A Cheering Experiment

BY ALLEN LATHAM

IN writing our opinions for publication, too many of us I fear write from too narrow a point of view, failing to put ourselves in the other fellow's shoes while offering advice. The veterans, in particular, are writing from the point of view of the specialist, and have all too little sympathy for the tender feelings of the man with two colonies.

For instance, a beginner asks what he shall do with a weak colony, and is told to double it up. Now a man with 100 colonies can not pamper a weak colony, for it will be a waste of his time, for has he not the ninety and nine left? But the man with two colonies does not feel like cutting down his apiary 50 percent at one slash.

I sometimes wonder whether even the old vets don't once in a while recall the time when they would do almost anything to save the individuality of a weakling colony, a time when the loss of a colony carried with it a pang akin to the loss of a child, though the feeling be ever so far removed in degree.

I have not yet reached the time when I can with complacency see the destruction of an individual colony, and I still put myself to great inconvenience to save the life of such. It is the purpose of this article to describe the saving of a little colony last year.

Some seven years ago I fell into possession of a stray swarm which had been living on the branch of an apple-tree two or three weeks. I cut off the branch and fastened it in a common box about which I put many thicknesses of paper with roofing-paper outside. This colony built up and has furnished me with one or two swarms nearly every season since. Naturally it has acquired an individuality of its own.

Last winter nearly proved its death. When the bees flew in March last there were but a mere handful compared with the pile of dead bees on the bottom-board and the thousands which clogged the spaces between the combs. It was a most disheartened and wretched weakling, and I felt assured that, unless I bore a helping hand, it would be numbered with the dead.

Understand that I am writing to the man with one or two colonies, and you who own your hundreds will only scoff at what I have to say, so you would better not read further.

I made a box much larger than the hive, and in the box arranged a shelf of thin board about 10 inches from the bottom. Flush with this shelf in front was a flaring entrance, while under the shelf was built a chamber which opened by a double door to the outside in the rear. The hive was set in without its bottom-board on the shelf, and all about it was packed ground-cork. Thus the hive was amply protected from cold. Over all was put a tight cover. It required less than one afternoon to put the whole thing together in good shape.

An old gallon can was hunted up, filled with boiling water, and put in the lower chamber. Over the entrance, which I have said was flaring, the outside size being about 10 by 3 inches, was nailed a wire-cloth screen, lightly nailed so that it could be easily stuck on and pulled off.

In less than 3 hours the bees began to feel the warmth from the water and began to appear at the entrance. The next morning I removed nearly a cupful of fragments of bees from the wired-in porch of the hive, and for about 3 days nearly the same amount of refuse was piled out next to the wire-cloth. The colony was extremely weak and made little effort to leave the hive, bending all its energies to house-cleaning. I had, of course, brushed out all the dead bees I conveniently could before setting the hive in place, but the bees found hundreds dead in the cells, and to get them out they had to pull them to pieces.

The can of water was renewed daily, or else brought to the boiling point by setting on the stove. By the way, always remove the stopper when the can is set on the stove. I did not do this one day, and when it blew out later on there was a good exhibition of a spouting geyser.

In a few days this little colony was carrying in more flour and meal than any other colony, and seemed to be getting into prosperous shape. For 3 weeks they carried flour and afforded an opportunity to compare flour with pollen. Flour is a poor substitute, though better than none. Bees brought up on flour appear to be short-lived and less energetic, unless the experiment for some other reason cut down the length of life and energy of the bees. The nurse-bees are rendered costive by flour, and find difficulty in ridding their systems of the pasty mass which, as it is ejected about the hives, has the appearance after drying of vermicelli.

The can of water was furnished the colony for 4 weeks and more, till the colony had gained a strength that warranted letting it shift for itself. By early June it compared very favorably with my average colonies.

I drove a swarm from it late in June, and to-day I have the swarm and the parent colony both in excellent condition, and in every way equal to my best.

I got much pleasure out of the experiment, for the work came at a season when bees required little attention, and there was solid comfort in seeing the colony grow from a hopeless wreck into a self-supporting colony.

So I say to all little bee-keepers: Do not double up your colonies from necessity, for if you wish to save a weak colony so that your apiary may hold its own in numbers, you can do so by doing as I did.

Does it pay to double up? Even if your colonies number hundreds does it pay? Evidently it does or so many successful apiarists would not recommend it. Yet my own experience in doubling up has never been satisfactory in the results obtained.

It has always been my experience that the double swarm seemed to have at the end of a few days only as many bees as the single one which occupied the stand had before doubling. Possibly I do not understand doubling, but it is my opinion that after doubling many bees are stung, many do not like new quarters and leave, and many die from failing to mark the new location. For a day or two the double colony appears to have received new life, but there follows a rapid decline into a state no better than existed before doubling.

The fact is that in the weak colonies, as a rule, there are only old bees, and old bees are not worth doubling. But if there are a few hundred new-season bees the results will be very different. I have seen amazing results follow the introduction of a pint of young bees into a weak colony—new life and rapid building up quickly follow.

New London Co., Conn.

Convention Proceedings

Papers Read at the Minnesota Convention

Held at Minneapolis Dec. 7 and 8, 1904

SOME THINGS I HAVE LEARNED ABOUT BEE-KEEPING

My first interest in bees dates back to the early fifties, when as a small child I observed an old man hiving new swarms in hives that were up to date at that time. They were boxes 12 or 15 inches square and two feet or more high, hung upon flat posts by cleats nailed to their sides, the posts having similar cleats for the hives to rest upon, and when the hive was in position the bottom was about 15 inches from the ground. The bottom-board slanted enough so that anything dropping down inside the hive was easily carried out by the bees. The bottom-board projected about three inches for an alighting board. Two sticks were fastened crosswise near the center of the hive to help support the comb. Two or three holes were bored through the top of the hive which were closed with stoppers, the same being removed when supers were placed in the hives for the surplus honey. These supers consisted of square boxes and round ones about the size of one peck measure. When this man thought there was surplus honey to take off he would take a broom straw and remove a stopper inside of the super, run the broom-straw in, and upon drawing it out would look for honey on it, and by the amount of honey on the straw he would judge as to whether it was best to take off surplus honey!

It was observing this man handling his bees, and the bits of honey he gave me from time to time, that caused me to try to keep bees later on.

Upon taking my homestead rights in Renville county, in 1877, I still had a desire to try to keep bees, but I was told I could not keep them on the prairie, so I did not undertake it until after some years when I found a swarm of bees had taken possession of a martin house on top of the barn. I tried transferring these bees into a box, but they soon died.

The spring following I bought two colonies and from that time until now I have not been without bees and honey. First I used the Langstroth portico 10-frame hive with wide-frame section-holders in the supers. My bees would swarm before they would work in the supers.

With these I had better success in obtaining honey in sections; but even with the 8-frame dovetail hive and the latest improved section-holder I found only one or two hives in an apiary of 15 or 20 would store much section honey. My opportunity to study and observe the bees was limited, as farm work took my attention, so I learned but slowly from the school of experience.

Now after fifteen years of keeping bees I have decided upon what I believe to be the best method to adopt, to obtain the best results in getting surplus honey, both extracted and comb.

On all good, strong colonies I place full extracting supers with full-comb frames, or full foundation frames. If any of the colonies get the swarming fever and a large swarm comes off I hive it either on full-comb frames or full foundation frames, and place a section super with foundation starter in the sections. In this way I find the bees almost always go to work at once, filling the sections. Sometimes I take the frames from the extracting supers to hive the bees upon, substituting comb foundation frames for the extracting supers.

Now it occurs to me after these years of handling bees, since I have taken more time to observe them, that I have hardly begun to learn anything about them. They do things sometimes that are so unexpected that I have decided it would take much longer time, were I able to do so, to tell what I have yet to learn about bees than what I have learned.

The past summer, on two occasions, I observed a swarm come out of one hive and enter another, the hive of another colony that had just swarmed, and owing to the queen failing to fly, they came back and all entered the same hive peaceably, and each time they swarmed in about 3 days, and I hived them. Both swarms seemed to be double ones and stored a good quantity of surplus comb honey.

Another surprise for me was when I was shaking a plum-tree I observed what I first thought to be a hornet's nest, but upon closer examination I found was a swarm of bees. This struck me as very strange, as it was Oct. 1, and I had seen no signs for two months or more of the bees swarming. Upon getting the bees down and shaking them in front of a hive I found they had built a good-sized comb on the limb.

In conclusion I will say in behalf of the great State of Minnesota, when one can do as I have done, take many pounds of the finest honey from the cornices of houses, and obtain plums and honey from the same tree, it is a good State to live in. I believe it will be in the lead of all States in all lines of advancement and progress. H. V Poore.

Renville Co., Minn.

BEE-KEEPING FROM A WOMAN'S STANDPOINT

Anything that tends to outdoor life has always appealed very strongly to me, so when I began, some three or four years ago, to read a series of articles in one of our farm papers on "Bee-Keeping for Women," my interest in the subject was aroused.

I had always said that there was *one* thing that should not come on our place, and that was a hive of bees, but when I read of the wonderful things that a woman could do, and how alone and unaided, even by her husband, she could supply her own table, and that of all her relatives and friends, and still have enough to sell so that her pocket-book would be full and running over at Christmas time, I was a firm believer in the bee as a money-maker. I at once sent for the "A B C of Bee-Culture," also subscribed for "Gleanings" and later on for the American Bee Journal. Every spare moment was spent in reading, until at last I decided I *must have* a colony of bees.

One April morning I found, among other birthday presents at my plate an envelope containing some money, whereupon the children exclaimed, "Now mamma will have her bees!"

A few days more and I had called upon Mr. Acklin, and made my first investment in one colony of Italian bees, veil, smoker, etc. As that was the first time I had ever seen a bee-hive, and stood in mortal fear of the bees themselves, I felt when I started home that I had thrown my money away.

The next day a telephone message announced the arrival of the bees at the express office, and suggested that I call for them at once. This only increased the "sinky" feeling, but smothering it as best I could I started out although with many misgivings.

My husband came home with me, and suggested that we stop at prayer-meeting on the way home! We did so, but a longer hour I never spent. The possibilities of unction *not divine* in case one of the small boys hanging around outside should take a notion to see the inside of that hive were anything but pleasant to contemplate.

The bees were finally safely landed at home and the number of cakes of honey that were promised to friends from that colony were beyond count.

Imagine my feelings when fall came and I had nothing to show for the summer's work but an empty super and one swarm—a good, strong one, however, which came out July 18.

The next spring the fever ran higher than ever, and when a man drove in one day and offered me three colonies of bees for a pair of fine geese, the trade was quickly made.

I was now fairly started in the business, and in a position to put to the test the theoretical knowledge I had absorbed during my year's reading.

Right here let me say to those who sneer at "book farming," that in my case at least theory and practice have fitted together very nicely. In addition to reading everything I could find on the subject, I have driven miles to talk with other bee-keepers. I have always found them willing and glad to aid a beginner, and many thanks are due them all, for much timely advice and help.

Every year since then I have added to my small beginning, both by natural increase and purchase, until I now have about 35 colonies, and the yield last season, of both comb and extracted honey, far exceeded my expectations.

Living on one of the principal thoroughfares out of Minneapolis, there is a constant demand for honey by people who see the hives in the yard, and I have no trouble in selling my crop at a good price.

A few months ago the question was asked in the Rural New Yorker, how a young woman of 20 could stay on the farm to assist her mother, and at the same time earn a little pin-money for herself. A large number of answers were sent in, advising her to try everything from sewing to small fruit, poultry-raising being the favorite, but not one mentioned bee-keeping. Just which one the young lady decided to try we shall probably never know, but, if she is like most women, she is experimenting with them all.

It seems to me there is no comparison, both from a financial standpoint and the labor involved, between caring for a flock of poultry large enough to yield an income, and 30 or 40 colonies of bees. I know whereof I speak, for I've tried both.

How much pleasanter it is on a cold, rainy spring day to think that your bees are safely housed than to don waterproof and rubbers—if they're handy, and if not to wade out without them—to chase some poor half-drowned chickens or turkeys that have been foolish enough to leave their mother's wing.

Then, too, during our long, cold winters we know that our bees are safe and sound in the cellar without further care from us until the warm April days call them forth.

So far I have taken care of my 35 or 40 colonies without any help except at swarming time. Occasionally an obstinate swarm would take to the top of a tall tree, but I have generally been able to control them with a small spray-pump.

I have been surprised to find how few women are engaged in this most interesting of all outdoor occupations. How much better to spend our spare time in the sunshine and fresh air, studying and caring for these tireless little workers, than to strain our eyes over the embroidery frame or intricate lace stitches.

To me there is nothing more fascinating than to watch the bees as they come in with their loads of golden pollen, or to open a hive and study the combs as they are filled with the tiny eggs or the young bees just hatching, and to hunt out the beautiful queen as she moves around among her subjects. Truly we may say, "Marvelous are thy works, O Lord."

Hennepin Co., Minn. MRS. W. S. WINGATE.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

What to Combine With Bees

From time to time the question arises, "What business combines best with bee-keeping?" However it may be with the brothers, most of the sisters have no need to cogitate long about it; for them perforce house-keeping in the fullest acceptation of the term is with bee-keeping the combination. And the combination is not a bad one. A rainy day is not a good time to work with bees; but just the time to put up fruit. House-keeping keeps one too closely in the house; the work at the bees gives the chance for the needed sun and air. The sisters who enjoy bee-keeping, if they do not live the longer for it—and many of them do—have at least more of life for their work with the busy little insects.

See what Mrs. Honaker has to say about it in her article on this page.

* * *

Bar-le-Duc Preserves—Currants and Honey

Inserted is this recipe, which never before appeared in print to my knowledge. Up-to-date cooks know that this imported delicacy is becoming more and more popular, as it is better known, though its price made it prohibitive where economy was essential. Where time is no object, and is more plentiful than money, one can now make this at home in the currant season, and nothing surpasses it as a company or holiday dainty.

Take selected red (or white) currants of large size, one by one, carefully make an incision in the skin ¼ of an inch in size, with tiny embroidery scissors. Through this slit, with a sharp needle, remove the seeds, separately, preserving the shape of the fruit. Take the weight of the currants in extracted honey, and, when hot, add the currants. Let simmer a minute or two, then seal as jelly. The currants retain their shape, are of a beautiful color, and melt in the mouth. Should the currants liquefy the honey too much, carefully skim them out, reduce the syrup at a gentle simmer to desired consistency, and store as before after adding the fruit.—Boston Cooking School Magazine.

* * *

Bee-Keeping for Women—A Desirable Occupation

In almost every rural community there are a number of women with considerable spare time on their hands and with a laudable ambition to engage in some small business which will insure them an individual income. To such, when favorably located, I would say, "Try bee-keeping." There is nothing about or connected with the work repulsive to the most fastidious, nor is there with the possible exception of cellaring, anything about it beyond the strength of the ordinary woman. Any woman who is able to do the work of the average household, is able to take care of a small apiary. The returns from even a few colonies should, if bees are well managed, be sufficient to insure financial independence; while as experience is gained and the colonies increase, a larger income may be expected.

I do not mean to infer by this that women should endeavor to support themselves by any kind of special effort, but only to encourage those who are able and anxious to "do something," by pointing out to them the advantages of this most desirable occupation for the ambitious woman. For indeed it is a desirable occupation in more respects than one. Profitable, and moreover strengthening and uplifting to body, mind and soul, it is well able to supply the needs of many classes of women. There is possibly no occupation open to women capable of inspiring so much interest, enthusiasm and spiritual contemplation as that of apiculture. Even a woman's natural repugnance to "crawling things" is forgotten, and the wonder and admiration excited by a closer acquaintance with the busy little workers leads her to a greater appreciation of the provision of an all-wise Creator for the "children of men."

Then because of this same uplifting and ennobling influence, I would say to those women who are bowed down with mental care and worry, and who feel that life has brought to them too little of its sweets and too much of its bitter dregs, "Try bee-keeping." Oftentimes this would prove more diverting, more effective than a change of scene and habit which physicians are so prone to advise. For most country women, especially those whose interests are centered in a farm home, there is small opportunity, and, only too often, small means for travel, in consequence of which the soul-sick and sorrow-burdened woman struggles on in suffering and despair until roused in some chance way, or until death ends the scene. If such a one could or would be induced to undertake the care of a few colonies of bees, untold good would probably result, and life would soon take on a new and broader meaning.

Not only is bee-keeping conducive to mental and moral health, but to physical as well. There is nothing which calls into play all the muscles of the body more effectually, and that, too, in the open air, than the various changes of work called for in bee-keeping. To those, then, who are in declining health, and who feel the need of wholesome outdoor exercise during the pleasant days of summer, I would say, "Try bee-keeping." Many a consumptive and rheumatic sufferer might have been relieved, and possibly cured, if bee-keeping had been engaged in at an early stage in the progress of the disease. Many another might be saved now, by engaging in it before it is too late for any means to avail.

Of course a certain amount of time must be available for the purpose before bee-keeping should be engaged in by any one, whether man or woman, whatever the object. For this reason it should not be undertaken by women whose hands are already full to overflowing with other work. But otherwise, other things being favorable, it is an occupation suitable in every way for women—that is, for those classes and under the circumstances named above. MRS. MILLIE HONAKER.

Vernon Co., Wis.

* * *

Bees Working Well

My bees are getting lots of honey now. They are working well on a good flow. I have 12 strong colonies, all mixed bees. I had all Italians last year, but now all are mixed, I believe. MRS. D. MAYER.

Cherokee Co., Tex., June 5.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.

By E. E. HASTY, Sta. B. Rural, Toledo, Ohio.

BUYING QUEENS AND FOUL BROOD.

I wish to call attention to the fact that the Illinois Inspector thinks buying queens to be a leading cause of the spread of foul brood into clean territory. The Wisconsin Inspector is on record in the same direction, I believe. Let's have a National Inspector of the queen-breeding yards—bound to publish just what conditions he finds in every apiary that advertises queens for sale. Page 342.

CUT LOAF SUGAR FOR BEE-FEEDING.

Cut loaf sugar as a substitute for candy to put over a colony for wintering seems to have at least one excellent testimonial from the sister on page 343. Bees can work at but one side of a candy-cake, while Old Zero works at the other side. The cubes of loaf sugar will be more nearly enveloped by warm bees during the process of slow liquefication. This sister seems to find that they eat the most of it even in hives where they do not absolutely need it. And that's a good recommend for the form of feeding.

This lady seems to think it remarkable that it took her all last year to learn the different bee-traits. If she actually did all that we shall have to part with her—for the good of the human race. She must enter one of the great astronomical observatories, and in *two* years she will discover all the secrets of the universe.

BOSNIAN HIVES SHOULD BE POPULAR.

Bosnia seems to be the place for those who howl about the high price of hives—the government furnishes free lumber to make beehives. "Wish the kickers were all in Bosnia!" (Hive-trust man.)

FEEDING SUGAR AND FEEDING BACK HONEY.

So Hutchinson thinks that feeding sugar and feeding back honey are much alike in that almost any results *can* be secured. That phrase, "Almost any results can be secured," sounds like a stand-patter, worth memorizing. I suppose a good few of us experimented a little at feeding for sugar-honey—and our sections cost us much more than market price—and nevertheless we knew pretty well that we *could* make a success of it if it were worth while. Telling outsiders that sugar can not be profitably fed for surplus is not to be recommended—foolish, because they won't believe it—and immoral, because most likely it isn't true. Page 344.

HIVING SWARMS ON DRY COMBS.

Bees do swarm sometimes when they are in a very hungry condition; and it's not good practice to hive such on combs of honey. Results in excitement much like a robbing scrape, with more or less of actual robbing mixed in. Hive them on dry combs, and exchange for the combs of honey at nightfall. When the honey-flow is on, the practice referred to is not so bad; but even then bees like dry combs best, and will be a little more likely to stay. Page 345.

EXTRACTED VS. COMB HONEY.

I would lift my voice in behalf of that fool on page 345. He is not damaging the honey market probably, while his wise (?) brother may be doing just that thing.

QUEENS AND BABY NUCLEI.

If a queen is put in a baby nucleus only in warm weather, and only when ready to mate, the harm the new device does would seem to be reduced to a minimum. Quite curious if queenless bees are less tolerant of supernumery young virgins than bees of a colony with a laying queen are. According to John W. Pharr, page 346, the latter will feed them through the wires—presumably by the amount of sting-poison which they evaporate. Yet possibly this last may be wrong. All queens soon die from nerve causes if entirely bereft of company. Perhaps with only enemies for company death would be about as speedy, and the cause about the same.

SOUTHERN CANE SYRUP VS. HONEY.

So, according to the average Southern palate home-made cane-syrup is better than honey. We can thank Mr. Ashley for that item—even if we quarrel with the item itself. Page 348.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to Dr. C. C. Miller, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Stachelhausen's Practice With Shaken Swarms

On page 246 Mr. Stachelhausen says:

"I put the shaken or natural swarm on the old stand, and the parent colony close by its side; 10 days afterward the most of the bees of the old hive were shaken in front of the swarm and the queen-cells cut out."

I am in the dark as to why he waits 10 days in the case of a natural swarm. Is there not danger that, in case the old colony was not too much weakened by the loss of its field-bees, a second swarm may issue 8 days or so after the first one issued? IOWA.

ANSWER.—Although both shaken and natural swarms are mentioned, I suspect that when Mr. Stachelhausen spoke of "10 days" he had shaken swarms particularly in mind; for surely, in the case of a natural swarm, as you say, there would be danger of a second swarm before the expiration of the 10 days. With a shaken swarm there would be no such danger, provided queen-cells had not been started before the shaking. If I am wrong in any way about it, will Mr. Stachelhausen kindly correct, if this should happen to catch his eye?

Introducing Queen-Cells or Queens

Suppose an apiarist has a number of choice, ripe queen-cells in protectors, or just-hatched virgin queens in cages, and they are of superior strain. How can he introduce them to full colonies, remove the old queen at the time of introduction, and *know* that they will be accepted, and that the bees *will not* rear queens from their inferior brood, take the swarming notion, and do other things objectionable? KENTUCKY.

ANSWER.—I don't know. That is, I don't know how he can be entirely sure, for bees are somewhat given to cutting up all sorts of didoes. But by doing as you say he can be as reasonably sure as he can of most things in bee-keeping. Sometimes a queen-cell that looks all right contains nothing but a dead larva. In that case the colony would start cells of its own, and if strong enough would be likely to swarm as soon as the first virgin was ready to fly. So it would be a little safer to give a virgin queen. If not more than a day old, and caged, its acceptance would be practically certain. Indeed, if you take a virgin not more than 6 hours old—possibly it would be all the same if not more than 24 hours old—go to the hive and give to it the virgin queen without any caging, and then kill the old queen, there would be no question as to acceptance. There are still two "ifs" in the case: *if* there were no cells in the hive previously, and *if* the virgin is not lost on her wedding-trip. To provide against the first, you must make sure to kill all queen-cells in the hive at the time of giving the virgin or queen-cell; otherwise you will be pretty sure of swarming; and as to loss on the wedding-trip, you must take your chances and be ready to make good any chance loss.

Best Kind of Bees

Which kind of bees would you advise a beginner to get, the German or black bees, the Italians, or the Carniolans? Which are the best for comb honey? MAINE.

ANSWERS.—1. It doesn't make such a great deal of difference what kind of bees a beginner starts with, as it is so easy to change stock by the purchase of queens. So if he can get no other than black bees handily, let him start with them, and then get an Italian queen. Of course, if he can get Italian stock that will be better.

2. Italians are more gentle than black. Carniolans are reported to be still more gentle; but some report them cross. Carniolans may not all be alike, or not all pure.

Swarms Uniting

Last year a large swarm of bees came off, and while I was preparing to hive them a swarm issued from another hive and settled with them. I didn't know how to separate them, and as they seemed to agree I put 2 hives together, one on top of the other, making a double-decker of it. They did well. This was a new thing to me. In a few days another swarm came off, and while getting them into the hive a swarm from another colony came pouring into the hive. There was nothing else for me to do but to make another double-decker. This thing was repeated the third time.

This spring one of those double-deckers has swarmed. There seemed to be a half barrel of bees. They couldn't all get in a single hive any way I could fix it, so another double-decker was made.

What should I have done with them, and what am I to do in the future. If they keep this up I will have to get some 10-bushel boxes. IOWA.

ANSWER.—Some throw a sheet over the hive to prevent another swarm uniting with it. If they persist in spite of the sheet, you can help matters by having a smoker in full blast and playing lively upon them. A better way is to have your queens clipped; then when a swarm issues, move the old hive away, set a new hive in its place for the swarm to enter on its return. Pick the queen up when she comes out, and let her run into the new hive with the swarm. With this management swarms will seldom offer to unite.

A Queenless Colony

1. My bees are doing very well now. I wintered 7, but have lost 2, and one other is very weak. What shall I do with it? I think the queen is lost, so I have thought that I would put in with them the first swarm that comes along.

2. Would you advise putting another super on the hive before they swarm? They seem to be rather lazy. WISCONSIN.

ANSWERS.—1. Yes, you can put a swarm with them if they are queenless, or you can unite them with the weakest of the others.

2. Giving more room is not a cure for laziness unless they actually need the room. But be sure to give them all the room they need, and the best way to be sure of that is to give it a little before it is needed.

Asking Questions—Hive-Ventilation—Feeding Honey—Ants in Supers

1. Can one ask as many questions as he wishes, if they are not answered in his bee-books and are about bees?

2. Does a hive need ventilation if in the shade, and, if so, would it need it when the temperature gets up to 90 degrees in the shade or below that? How low can the temperature get before it needs shutting down?

3. Is it all right to feed honey in the comb from a colony that has died during the winter, if it smells all right, and would it be if it did not?

4. Would it do to put a little chunk of comb honey at the entrance at night to stimulate brood-rearing?

5. Do black ants harm anything in the upper stories? IOWA.

ANSWERS.—1. Yes, provided he does not ask more than 52 times in a year.

2. Yes. I once had combs melt down in a hive so thoroughly shaded that the sun did not shine on it all day long; but there was a thicket on one side and a corn-field on the other, so that there was little chance for the air to stir. A colony must have ventilation to some extent always; and, of course, it will have some ventilation with a very small entrance. At any time when bees are busy gathering there should be sufficient ventilation so the bees will hang out. An entrance equivalent to 9 square inches is as little as should be allowed, and if that can not be had otherwise the hive should be blocked up. But 20 square inches of ventilating space is better than 9. There is no need to make any change when the temperature runs up to 90 degrees, nor when it runs down on cold nights.

3. Yes, it is all right to feed honey from a

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17A26t FREDERICKSBURG, VA.

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colony that died in the winter, unless the colony died of a contagious disease such as foul brood, pickled brood, or black brood.

4. Yes, provided you do not leave it to start robbing in the morning.

5. No, except to annoy the operator by crawling over his hands and biting. There are, however, ants in the South that ruin whole colonies; and even where you live there is a very large kind that honey-combs bottom-boards.

Starting With Bees

I am a novice in the bee-business, having just started this year.

I began by buying one colony of a bee-keeper close by, and the combs are so built that I can not get the frames out to examine them, so I can not tell whether they have started any queen-cells or not, and do not know whether they will swarm in a day or two or a month.

This has been a very cool spring, but we have had a few nice days, and it has not been so cool but that the bees could fly nearly every day. But when we would have a nice day the bees would come out and fly around the front of the hive so one could hardly see it. It has been nice for nearly a week, and the bees are not flying around the hive now, but seem to be working. Do you think they have swarmed and left, or that the last few warm days have brought the flowers out and they are in the field working? White clover is nicely in bloom (June 3), and also a good many wild-flowers. KANSAS.

ANSWER.—It is hard to be positive about it. It may be that the bees tried to swarm on the days when they were so thick on the hive, and some defect prevented the queen flying with them; and it is possible that they were out for a play-spell. If the bees were so thick on the front of the hive that they actually covered it from sight, they were probably swarming—that is, they had swarmed out, and you saw them when they had returned.

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Reports and Experiences

Bees Storing Honey

The bees are working fairly well. Some have two supers on and some one. They are not all filled yet. The colonies which I am running for extracted honey are doing splendidly. I try to keep the bees from swarming, but some of them will do so in spite of all my endeavors. I have had 2 swarms this season, one on May 5 and the other to-day.

D. C. McLeod.

Christian Co., Ill., June 5.

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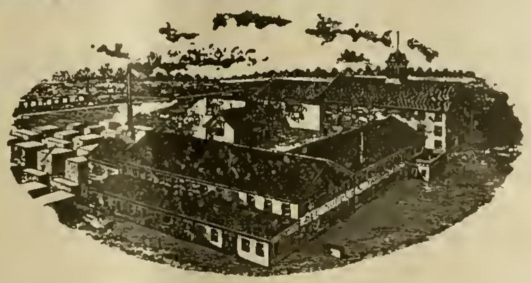

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2. Sending your own name with the $1.00 for the Bee Journal will not entitle **you** to a Queen as a premium. The sender must be already a paid-in-advance subscriber as above, and the new subscriber must be a **NEW** subscriber; which means, further, that the new subscriber has never had the Bee Journal regularly, or at least not for a whole year previous to his name being sent in as a new one; and, also, the new subscriber must not be a member of the same family where the Bee Journal is already being taken.

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combs on top of them, then pour in water till nearly full. Having put on the cover, put a smooth, clean stone on it. The cover is made of heavy galvanized or tinned sheet-iron, with holes made about the center, and nailed to a cross made of boards 3 inches wide, notched to fit each other, or like paste-board in egg-cases, and just the length of the width of the can, so as to keep the cover from tipping as it is forced down.

Boil slowly till all the wax is on top. Let it cool on a slow fire. The combs will render better if exposed to the sun for awhile.

Jamaica, W. I. ROBT. WEST.

Backward Season—Bees Dying

The season has been backward. Bees did nothing on apple-bloom, and white clover had no honey till the past few days. The bees are booming on it now.

Some 10 days ago as I was looking over the bees I noticed a number crawling on the ground as though they were drunk. Later they seemed to be all coming out of the hive, and the next day all were dead. It was one of the strongest colonies. I can give no reason for their death. No other colonies seem affected any way. I imagine they found poison somewhere. I don't think it could be from spraying. S. N. BLACK.

Adams Co., Ill., June 2.

Marketing Unripe Honey

The unripe-honey talk in the May 18 issue is right, and if the advice were followed by all producers the demand for honey would surely be greater than it is now. Last year I was particular to extract all the unsealed honey beforehand from every comb, and this was kept warm in a tank over an oil-stove for several days, until it was good and thick.

Of course this did not have quite as good a flavor as the all-sealed honey, but perhaps was better than the whole lot would have been if extracted together.

Ashtabula Co., Ohio. H. E. CROWTHER.

Treatment of Robber-Bees

I had a little experience with robber-bees which might help some one some time. I had a weak colony which I thought to strengthen a little by giving them a frame of brood from a strong colony. I had no sooner done so than another colony of rather black bees commenced robbing this weak one. I covered them up with a horse blanket, but they would crawl under. Then I piled grass before the hive, but to no purpose. I closed the entrance to one bee-way on the start; but they bothered 2 or 3 days. I tried putting the weak colony where the robber-colony was, and vice

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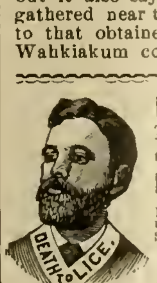
versa, to see what they would do. It worked all right as far as I can see. The robber-bees were pretty quiet for a few days, but are now working nicely. The weak colony, of course, got the field-bees, and peace once more reigns in our midst. I don't know much about bees, but I had to do something, so tried the best thing I could think of. I put away 5 colonies last fall, and brought them through the winter, but lost one after putting them out this spring. H. E. Bartholomew.

Du Page Co., Ill., June 4.

Home-Made Hives—Honey on Coast

It is hard to say what is best for others, but as I am a carpenter and have a saw-table and tools I can make hives cheaper than I can buy them. Hive-bodies that cost 50 cents at the supply dealer's in Portland cost me 30 cents or less to make them, reckoning $3 per day for the work, and I use better lumber. In the apiary no one could tell the difference between them and the factory-made hive. If there is a bee-supply trust I don't know it, but nearly all have the same prices. How would it do for the bee-keepers to form a trust or a union?

On page 199 it says, "Oregon was represented by a small quantity of inferior honey," at St. Louis last year. Perhaps that is true, but it also says, "It is said that the honey gathered near the Coast is inferior in quality to that obtained further inland." I am in Wahkiakum county, on the Coast, and have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considered the honey the very best, if well ripened. I think it far superior to any California honey, and the public are my judges. When I first sold honey here it was always said, "Well, that is honey. It is not like the California honey." That was years ago, and those people are my customers still.

The bees are doing well. They were all strong in the spring, and have 25 and 30 pounds of honey in the supers. O. K. RICE.
Wahkiakum Co., Wash., May 22.

[It must not be inferred from the above that California honey is inferior to any honey in the world. Every State produces the "best honey," we have learned. It is all according to one's taste as to which is the "best honey."—EDITOR.]

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Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. FRED FODNER.

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Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

Honey and Beeswax

Chicago, June 7.—The volume of sales is infinitesimal; hence prices are not considered important at this season. Comb brings 12@12½c per pound for best grades, off lots 7@10c. Extracted, 5@7c, according to what it is. Beeswax sells upon arrival at 30c per pound.
R. A. Burnett & Co.

Cincinnati, June 2.—There is only a fair demand for honey at the present time. We quote amber extracted honey in barrels at 4¾@6c. according to quality. White clover extracted at 6½@8c. The comb honey market is practically closed for the summer. Beeswax, 29c.
The Fred W. Muth Co.

Boston, May 23.—Our honey market continues very dull, with very little movement to be noted. We quote fancy white at 14c; No. 1, 12½@13c. Extracted, from 6@8c, according to quality. Blake, Scott & Lee.

Philadelphia, June 17.—As the season advances, there is very little call for comb honey. In fact, no sales, and we make no quotations. Commission men are accepting any offer they can get for what little stock they have on hand. Extracted honey is in some demand. Possibilities of a big crop are holding prospective buyers back. We quote: Fancy white, 7@7½c; amber, 6@7c; dark, 5½@6c. Beeswax in good demand, 29@30c.

We are producers of honey and do not handle on commission. Wm. A. Selser.

New York, April 19.—There is no change in the condition of the honey market. Very little comb honey selling and prices ruling about the same as our last quotations. Extracted in fair demand only. Beeswax firm at 30c.
Hildreth & Segelken.

Kansas City, May 12.—The honey situation is a little stronger, and there is but little honey left in the hand of the dealers. Best honey bringing from $2.25 to $2.50 a case; amber at from 25@50c a case lower. Extracted, 4½@6c. Beeswax, 28c. C. C. Clemons & Co.

Cincinnati, O., June 9.—There is no demand for comb honey on account of the warm weather. Extracted is in usual demand for this season of the year. We quote white clover at 7@8c; amber, in barrels, at 5¼@5½c; in cans, 5¾@6c. Beeswax, 28c. C. H. W. Weber.

Albany, N.Y., June 10.—Our honey market is practically over for this season and won't begin again to any amount until August or September. We have carried over very little stock of either comb or extracted. We quote nominal quotations for honey in good condition. White comb, 12@14c; mixed, 10@12c; dark, 10@12c. White extracted, 5@6c; dark, 5@6c. Beeswax, 28@32c. H. R. Wright.

San Francisco, May 31.—White comb, 1-lb. sections, 11@12 cents; amber, 8@10c. Extracted, white, 5½@6 cents; light amber, 4@5c; amber, 3@3½c; dark amber, 2½@3c. Beeswax, good to choice, light, 27@29c; dark, 25@26c.

The ship Atlas, sailing Saturday last for New York, carried 236 cases extracted, reported to be Hawaiian Island product. Offerings of this year's California honey so far have not been large, and mainly by sample. The movement on local account is light.

☞ The most attractive eastern excursion during the coming summer will be to Asbury Park, N. J., on occasion of the annual meeting of National Educational Association, July 3 to 7, inclusive, via the Nickel Plate Road and its connections, either the West Shore or Lackawanna Road, with privilege of stop-over at Chautauqua Lake points, Niagara Falls and New York City. Rate, $21.35 for the round-trip. Dates of sale, June 29 and 30 and July 1 and 2, with extreme return limit of Aug. 31, by depositing ticket. Patrons of this route may have the choice of a ride over the most interesting mountain scenery in New York and Pennsylvania, and through the celebrated Delaware Water Gap, or through the beautiful Mohawk Valley and down the Hudson River, which also includes the privilege of a ride on day line boat on Hudson River, between Albany and New York City, in either direction, if desired. No excess fare charged on any train on Nickel Plate Road. Meals served in Nickel Plate dining cars, on American Club Meal Plan, ranging in price from 35c to $1.00; also a la carte. Chicago Depot, La Salle St. Station, corner Van Buren and La Salle Sts. City ticket offices, 111 Adams St. and Auditorium Annex.

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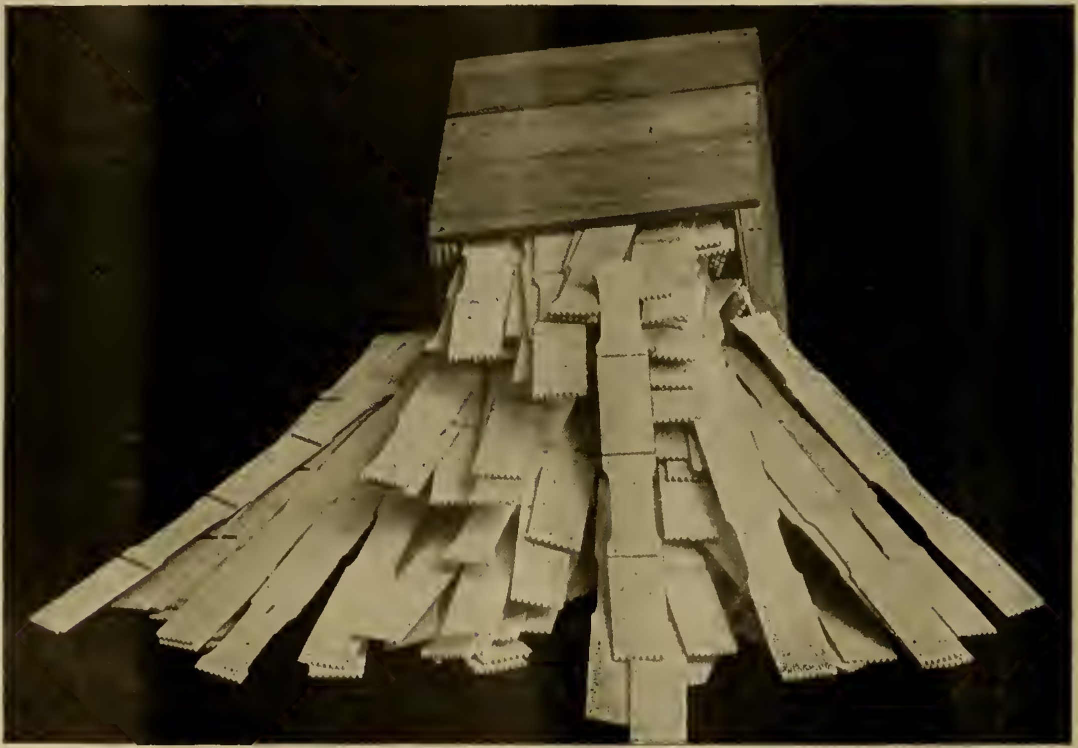

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Published by GEORGE W. YORK & CO., 334 Dearborn Street

45th Year CHICAGO, ILL., JUNE 29, 1905 No. 26

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GEORGE W. YORK, Editor
CHICAGO, ILL., JUNE 29, 1905
Vol. XLV—No. 26

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Editorial Notes and Comments

Scarcity of Section-Timber

Some alarm is expressed occasionally lest basswood timber become so scarce that it can no longer be used for sections, and the suggestion has lately been made that we may as well face the problem in advance, and turn our attention to deciding whether bulk honey or what else shall take the place of section honey.

There is no cause for alarm; there is plenty of timber left for sections, even if every basswood tree were wiped out of existence. To be sure, the change must be made from one-piece to the four-piece, but there are some now who prefer the four-piece, and there is no denying that the four-piece sections are in some respects better than the one-piece. The loss of basswood is not likely to make much difference to producers of section honey.

But basswood lumber is not going to run out entirely for some years yet, though it may, of course, continue to rise in price. Until basswood sections get to be $7.00 per thousand we believe they can be profitably used by the great majority of comb-honey producers, and possibly a few could afford to use them even at a higher price than that.

◆

Is Foul-Brood Legislation Effective?

In Ontario there were visited by the foul-brood inspector—

In 1900, 100 apiaries, among which 30 were foul-broody.
In 1901, 77 apiaries, among which 29 were foul-broody.
In 1902, 81 apiaries, among which 30 were foul-broody.
In 1903, 96 apiaries, among which 28 were foul-broody.

It will be seen that after the efforts of the three previous years there appear to be still left in 1903 nearly as many affected apiaries as at the first; and this is used by those across the water who oppose foul-brood legislation as proof that the efforts of Mr. McEvoy were of no avail. But does it so prove? What with the ignorance of bee-keepers regarding the disease, and the insidiousness of its approach, it might well be that in many places it would not be discovered until the third year of its existence. In the meantime, through the ignorance or culpability of those having infected colonies, it is possible that the seed might be sown widely and in unsuspected quarters.

Before pronouncing final verdict, some questions might be asked and answered. Were all infected apiaries discovered the first year, or were fresh discoveries made each year where the disease, not previously discovered, had previously existed? Were *all* the apiaries of Ontario, whether infected or not, visited prior to 1903? And without enumerating others, this final question: How much worse would the disease have been in 1903 if there had been no inspector in the three previous years?

◆

A Tack-Puller as a Hive-Tool

A common tack-puller, such as is used for pulling tacks out of carpet, and costing about 10 cents, is recommended in Gleanings in Bee Culture as an excellent hive-tool.

◆

Smoking Robber-Bees

Beginners need cautioning as to the use of smoke when working at bees, and when robber-bees begin to be troublesome. The first impulse seems to be to deluge the robbers with smoke to drive them away. So a good lot of smoke is blown all over the frames where the robbers are trying to get in. But that has its effect also on the bees of the colony, making them less fit to defend their home. The beginner will do well to avoid, so far as possible, having hives open when robber-bees trouble. Sometimes the robbers will not trouble at all if work be begun two or three hours later. If work be done in the evening, there is the advantage that night will soon stop the attempts of robbers. Yet evening is not generally the best time to work with bees. Especially when buckwheat is yielding, the gathering is done chiefly in the forenoon, when the bees will be good-natured, but cross in the afternoon.

◆

Invention of the Honey-Extractor

Here's a bit of history that may interest the younger readers:

Major Von Hruschka, a Hungarian, took from a hive a piece of unsealed honey and gave it to his boy to take to the house—some say in a tin pail, some say in a plate in the bottom of a basket. Boy-like, the youngster attached a string and whirled the basket about his head, and when the father looked at it he found the cells on one side of the honey-comb emptied. That set him to thinking, the result of which thinking was the centrifugal honey-extractor.

◆

Much Chilled Brood Reported

There seem to be an unusual number of complaints of chilled brood. It is easy to account for it by saying that it is due to the unusual amount of wet and cool weather, but it may not be out of order to ask whether this alone would have resulted in chilled brood if there had been no meddling with the brood-nest on the part of the bee-keeper. Indeed, it may not be an unfair question to ask whether chilled brood ever occurs in colonies left entirely undisturbed. When brood is spread, it may turn out all right if the weather favors, and it may be all wrong if the weather is adverse.

◆

Wintering a Queen With Few Bees

Many a bee-keeper has sighed for a plan by which he could winter over a queen without having her in a full colony. E. L. Pratt thinks he has solved the problem, and says in the American Bee-Keeper:

> I have successfully wintered queens in Swarthmore mating-boxes with less than a pint of bees to each queen, and have, I believe, solved the problem of early queen-traffic for the Northern breeder.
>
> It is surprising how well these little clusters of bees withstand the cold and blow of our severe Northern latitude—the rate of death seems much less in proportion to the strong standard colony—but being in compact clus-

ter directly on full combs of select honey, I suppose they have every chance. Where the full colony may become separated, these little clusters are closely confined in a given space.

I have not found it necessary even to cellar them. I, of course, provide shelter from the wind and the storm, either by placing the boxes inside a standard hive-body with a tight roof (four to a hive) and a flight-hole on each side, or inside a shed or small house, with flight-holes bored through the boarding.

In making up these wintering boxes I take up two or three cupfuls of young bees, as explained in my book, "Baby Nuclei," and just before winter actually arrives I give each box two fat combs of good honey; do this on a warm day to give the bees chance to settle as they like upon the combs. Do not disturb them again until spring, when they should be examined and supplied with more honey if needed, by changing the comb containing the least brood for one of honey.

To prevent any possibility of the queens wandering away from the cluster, place a piece of queen-excluding metal over the flight-hole on the inside. A ¾-inch flight-hole is none too large for wintering queens in Swarthmore mating-boxes.

Precaution in Handling Bees

Dr. J. D. Reynolds, of Cobb Co., Ga., sends us the following clipping taken from the Atlanta Constitution:

> CHARLOTTE, N. C., May 25.—(Special.)—Mrs. Mattie Beard, a prominent lady of this county, was seriously if not fatally stung by honey-bees to-day. Mrs. Beard, while attempting to save her cow from the bees, was stung 50 times on the face and neck. Her condition has been critical since 10 o'clock this morning, the attending physician holding out little hope for her recovery.

Dr. Reynold says, referring to the above, "though not very encouraging to the would-be bee-keeper, it might lead to more *precaution* in handling these irascible little insects."

There are some bee-keepers who do not approve publishing such items, but we fail to see the unwisdom of it. Surely, such items should be a warning not to go among bees without a good face and head protection. To do otherwise is dangerous, to say the least. But why run any risk when a good bee-veil can be bought for 50 cents?

Some bee-keepers seem to pride themselves on being able to handle bees without head protection. We think it is a false pride, and some day they may rue their presumption. It is better to be on the safe side always. Of course there may be emergencies that arise where a bee-keeper is away from home, and no veil at hand; in that case we would not take the risk—would prefer to let *the cow* take the stings.

Miscellaneous News Items

Mr. R. A. Holekamp, of St. Louis, Mo., we notice by the printed letter-heads of the National Bee-Keepers' Association, has been selected as a director in place of Mr. W. F. Marks, who recently resigned.

The State of Washington bee-keepers have succeeded in having passed at the last session of their Legislature a foul brood law. In substance it is similar to the New York law. "Among other things it provides that on petition of 10 apiarists in any county the Board of County Commissioners shall appoint an inspector of apiaries, whose pay shall be $3 per day while in active service. This inspector is authorized to inspect all apiaries and take steps to eradicate diseases to which bees are subject."

Washingtonians are to be commended for their alertness and pushing qualities.

The San Antonio National Convention.—Secretary Hutchinson sends us the following notice for publication:

> The International Fair holds its annual exhibition in San Antonio, Tex., Oct. 21 to Nov. 1. When this Fair is in progress there are very low rates in force on the railroads out for 600 or 700 miles. Then there are harvest excursions from the North on the 2d and 4th Tuesdays of the month. The 4th Tuesday in October comes on the 24th. Considering these facts, it has been decided to select Saturday, Oct. 28, as bee-keepers' day at the Fair. This will give ample time for members from the North to reach the city by starting the 24th. The regular sessions of the convention will begin Monday, Oct. *30, and continue three days.*
>
> The Fair Association has designated Saturday, Oct. 28, as bee-keepers' day, and will so advertise it, and especial pains will be taken to have on exhibition hives, honey, wax, bees, and other apiarian products. At this fair will be on exhibition all of the agricultural and other products of the South and Mexico, and a visit to it will really be worth all the trip will cost to give one an idea of the South and her products.
>
> Then the Texas members propose to give a genuine Mexican supper, which will be free to all outside members. There will be a Mexican band and toast-making—in short, it might be called a banquet. On Sunday the members can attend church or go on a trolley ride around the city. Side-trips to Uvalde and other places are planned for all who wish to see the country after the convention is over, bee-keepers at the various honey centers having promised to take bee-keepers around free of charge. Texas is one of the greatest, if not *the* greatest, of honey-producing States in the Union, and bee-keepers will now have an opportunity to see her wonderful resources, enjoy the hospitalities of her people, and profit by meeting in convention, all at a very small cost.
>
> The headquarters of the National Association will be at the Bexar Hotel (pronounced Baer, long sound of a), corner of Houston and Jefferson Sts., and rates are only $1.00 a day, and up. The convention will be held at Elks' Hall, 125 W. Commerce St., only two blocks from the Bexar Hotel.
>
> Everything is now all arranged except the program, and I wish that every one would write and make suggestions in regard to topics and men to discuss them. If you have no special topic that you wish put into the program, you must surely have some question that you would like brought before the convention. Pour in the suggestions and queries, and let me get up one of the best programs that we have ever had.
>
> Flint, Mich. W. Z. HUTCHINSON, *Sec.*

Mr. E. A. Morgan, who conducts the Apiary Department of The Farmer, published in St. Paul, Minn., speaks very highly of The Honey-Producers' League and its objects in the issue of that paper for June 15.

Contributed Special Articles

Putting Weak Colonies Over Strong Ones

BY EDWIN BEVINS

OWING to the success reported by Mr. Alexander and some others, in getting weak colonies in spring strengthened by placing them over strong ones with queen-excluders between, I tried it with two colonies this spring. In one instance there was no fighting; in the other there was some. Ten days after the unions were made there were no queens in the upper stories. I took away the zinc and let the queens of the strong colonies have the range of both stories until June 2, when I took off the upper stories and put supers on the lower ones. The colonies were very strong at that time, one of them much stronger than the other. This one was the yellowest and strongest in the yard. I call them "Yellow Devils." The bees seem to be of the strenuous, Rooseveltian type—always ready to work or fight.

Besides the two hives overflowing with bees at a time when an immense number must have been in the fields, there were five frames of brood in the upper hive. These I gave to other colonies, put two supers full of drawn combs in sections on the lower hive, and kind o' thought there would be no early swarming from that hive. Supers with starters in sections would likely delay the swarming some more, but I did not have them ready.

There was less honey in the hives of this yard than I have ever known at the date I mention, June 2. From March 1 to June 1 I fed all the colonies—140, more or less—with perhaps a dozen exceptions. I had to feed or let the yard be practically annihilated. The honey-flow did not begin till the afternoon of June 2. There was a thunder shower the night before, and that day was hot. In the afternoon the bees stopped worrying me and went for the white clover—the first time they have seemed to be in good nature this spring.

HONEY MARKET QUOTATIONS.

Have my brother bee-keepers read carefully the honey quotations as they have appeared in bee-papers for the last six months or more? What cheerful reading they make! Then glance, my dear brothers, over the quotations you have received for some other things which you *think* you must have, and ask yourselves how you are going to pay for them out of the net returns for your honey. Perhaps some of you have a home market for all, or most, of your product. Happy is the man who is in such a case. Cultivate the home market, but—and let the cities "go to grass."

"THINGS NOT SOLD FOR CASH!"

I must ask Mr. Davenport and others not to fire any more old chestnuts at me. I am not keeping bees now for the things I would not sell for cash if I could. I got enough of those things in the early days of my bee-keeping, but I will not deny that there is still a charm in the hum of the bees in the apple-tree bloom. I am keeping bees now mainly for revenue. But just as I have gotten the business up where there ought to be considerable revenue in it, the revenue has fallen out of the business. The bee-supply makers and dealers, the commission men and the railroads, get the revenue. I work for nothing and board myself. What am I going to do about it? I think I'll join The Honey-Producers' League.

UNITING AND WINTERING WEAK COLONIES.

In Coleman's "Rural World" a writer on bee-keeping says:

"Uniting two or more colonies in spring to make a good, strong one looks very plausible, but it does not work out in practice."

No? My way of uniting weak colonies in spring works out very well in practice.

When the honey-flow begins, and I find I have some weak colonies and some of moderate strength, I rob as many as needful of their brood, and fill those of moderate strength with combs of brood. Sometimes I take away all of the brood of the weak colony, and sometimes I leave the comb on which the queen has done her latest laying. Supers are immediately put on the strengthened colonies. Work goes on in the hives of the robbed ones, and I have some colonies for the fall harvest.

To winter weak colonies in the way and at the time which the writer above-mentioned probably had in mind is worse than useless. One must necessarily deprive himself of the work of one queen if 2 colonies are united, and of more than one queen if more than 2 colonies are merged into one. Then the bees thus added are so old they will not be likely to live long enough to be of much use as honey-gatherers. By the method I use we have the work of all the queens all the time. The frames of brood can be put in other hives at the beginning of the honey-flow, and utilized for a time as dummies, and then the bees from them will add to the working force of the colony right in the midst of the honey-flow.

Decatur Co., Iowa.

Distinctive or Individual Odors of Bees

BY ARTHUR C. MILLER

Does or does not a colony of bees possess a distinctive, individual odor, one differing from that of another colony? So many happenings in the regular course of the daily work with bees can be explained by an affirmative answer that it is currently given, but is it correct?

When honey is being stored freely it is an easy matter to unite bees of different colonies or introduce alien queens, but the instant the flow stops difficulties are experienced. Under such circumstances, when all bees and combs are in a sense saturated with the odor of flowers of some sort, we should not meet with any hindrances, if the theory is correct. It will not do to affirm that the individual odor—or body odor, if you prefer—is more potent than the honey odor, because we know that when the flow was on, we met with no trouble, and if such odor existed at all, it must be as potent during the flow as the day after.

If the odor of a bee announces to the guards of a colony that she is an alien, why do they pounce upon her in one case and not in another? If the alien odor is an excitant to the guards, why do they permit a laden alien to enter? If the odor of bees from an alien colony stirs the guards to attack, why do they permit alien drones to enter freely, for surely drones must possess the home odor (if it exists) as much as do their sisters? And it should be noted that the presence of an abundance of alien drones does not help their sisters to a friendly reception. Why are very young aliens accepted anywhere at any time? Has their youth prevented their acquiring any home odor?

If home odor guarantees a bee full freedom of her own hive, why do the bees ball their own queen when they chance to be overhauled at some inopportune time? In the excitement does she drop that gauzy-tissued garment, odor? If odor is a vital, or even an important, factor in the introduction of alien queens, why is a queen introduced by caging sometimes killed despite the supposedly acquired odor? Or why is a queen run in free, under one of several conditions, not killed? The first is supposed to have acquired the odor of the receiving colony and the second has not. If the bees recognize an alien queen by her odor why will they, with their own queen free in their midst, accept any number of queens we choose to give? Or why will they sometimes ball their own queen when she returns to them after a few minutes chance separation?

It may be asked why the bees of different colonies do not intermingle more frequently if odor is a slight factor. Chiefly, I believe, on account of their wonderful sense of location. They will "home" if it is possible to do so. When conditions interfere with this, they readily gain access to some other colony. I recently saw an excellent illustration of this. A colony of "golden" bees stood near the windward end of a row of colonies of dark bees, and the bees of the former had distributed themselves all through the leeward colonies, the colony next to the goldens containing a lot of them, the next not quite so many, and so on down the row. The prevailing southwest winds did the distributing, and the other colonies freely received the aliens. Perhaps golden bees have no odor, or mayhap the dark bees had colds.

Many of these things occur too frequently to be logically called exceptions, and others can be so regularly and uniformly produced by the apiarist as to make the odor theory untenable. It is one of those beliefs accepted almost without question because our grand-daddies said so. It may be right, but, if so, how will we explain the multitude of exceptions? I believe the explanation is to be found in the attitude of the individual bee, the so-called "alien." I have satisfied myself that the queen's attitude governs her reception, and it is logical to assume that the same law applies to the workers. If a worker possesses senses so keen as to guide her from the fields to her home and direct her in so many, to us, intricate and obscure labors, it is quite reasonable to assume that these same acute senses quickly acquaint her with the presence of strange or unfamiliar surroundings, whereupon she is instantly on her guard. Her actions then govern her reception.

Providence Co., R. I.

Seasonable Manipulation of Colonies

BY G. M. DOOLITTLE

It was with great interest that I read the questions by "Pennsylvania," and Dr. Miller's answers thereto, found on pages 210 and 211, for they touched on something that has very much to do with the successful ending of the honey season for the apiarist.

In Dr. Miller's answer to question 5, he tells us regarding the number of times the hive containing the colony which gave him 300 sections of honey—the largest yield he has ever obtained from one colony—was opened, and what he did at each time he opened said hive. My method of working for comb honey has been condemned very many times, as being one requiring much "fussing" and manipulation, but if I ever opened any hive having a colony in it which was worked for section honey as many times during one season as the good Doctor says he did that hive, I do not recollect the same. Certainly, Dr. Miller does not train with the Hutchinson, Townsend, Alexander, etc., class, who believe in working bees with only two or three visits to an apiary each year, claiming that an extra number of colonies with little attention is better than a less number with manipulation. And, of course, I am on the Doctor's side. And why should I not be? None of these "many colonies with little manipulation" recommenders ever reported a yield of 300 sections of honey from a colony in a single season, nor anything like it, as far as I can remember; nor is their average yield of section honey anywhere near up to those who "look after the best interests of the bees and themselves."

But I note in Dr. Miller's answer to question 3, that he thinks I may enlighten the readers of the American Bee Journal regarding how I manipulated the colony which gave me 309 pounds of section honey in one season, the same being 30 pounds greater (in pounds) than that secured by the Doctor.

Like him, I opened the hive in April to see if the queen was clipped, and to know that there was honey enough to last them till the flowers bloomed. Then, about May 10, the hive was opened and the brood reversed. That was done by putting the frames at the outside of the brood-nest in the center, and those in the center on the outside, so that in a few days all frames having brood in them would be very nearly literally full of brood. As I used 9 frames to the hive, this caused 6 of them to become full of brood by May 17, when a frame of honey was taken from the outside, next the side of the hive, and the cappings of the honey broken by passing a knife over them flatwise, and bearing down on it quite strongly while doing so. This prepared frame was set in the center of the brood-nest, giving the bees great stimulus in removing the honey and storing it around about the brood.

On May 24 there was brood in the whole 9 frames, 7 of them being full all except the upper corners, the brood coming clear out to the wood of the frames on all four sides. At that time the brood-nest was reversed again, which practically filled the 9 frames with brood 5 days later. Also at this time of reversing the brood-nest, 2 frames having some honey in them were set in the space for the side sections, as this hive was calculated for sections at the side as well as on top. These frames of honey insured the colony against running short of stores to feed the brood, as well as to give room for bees, so that the hive should not become overcrowded so as to bring on the swarming fever. A week later 2 frames of the oldest brood were taken from the brood-nest and 2 frames with some honey in them, with the cappings broken, were set in their places, while the place for side sections, opposite from that having the 2 combs of honey put in the week before, was opened so it could be used. One of the frames of brood was placed in one side next the brood-chamber, and the other on the other side, while the 2 frames of honey were used by placing one on each side of these, so that I now had 13 frames in that hive, 11 of which would soon be solid with brood, or very nearly so.

At this time the sections were put over the brood-chamber, so that the bees had all the room that was necessary to spread out in to ward off the swarming fever.

When the colony was well at work in the sections the 4 frames in the side-section apartments were taken out and their places filled with sections. And this was all the manipulation used for the brood-chamber, or for the brood-frames in the hive. The rest of the work consisted in taking off the filled sections and putting empty sections in as needed.

From the above it will be seen that this colony giving the 309 pounds of section honey had its frames of brood-comb manipulated only 6 times, as against Dr. Miller's 9 times with his colony. This colony did not swarm, no increase was made from it, nor was it helped in any way, except as given above. That same year, two other colonies worked in the same way, gave each 306 and 295 pounds of section honey, while very many gave from 200 pounds up to the three above given. That same year a colony worked for extracted honey gave 566 pounds. This colony was worked very similar to the above, till it got its brood-chamber full of bees and brood, when it was set over into a hive 4 feet long, and holding 32 frames. This colony gave the remarkable yield of 22 pounds of honey a day. Or, to tell it just as it was, the yield was 66 pounds in 3 days, or an average of 22 pounds a day. This colony was not manipulated at all after it was in the long hive, only to extract the honey. In fact, after any colony has gone into the active storing of honey, I have never been able to see where any manipulation can help any.

As I look at it, only that manipulation which has an "eye" toward the securing of the maximum number of bees on hand just in time for the main honey harvest, counts anything toward the successful production of honey. And, as Dr. Miller says, "There's a big lot in that." Let me repeat it again like this, "THERE'S A BIG LOT IN THAT." And this I would say right face to face with Mr. Hutchinson, Townsend, and others, were I where I had the opportunity to talk to them thus. Onondaga Co., N. Y.

PS.—Lest I be misunderstood, allow me to say that I consider the "shook" method of preventing swarming far ahead of the cutting off of queen-cells. And as the larger part of Dr. Miller's manipulation was used to prevent swarming, I own that, outside of this, he used less manipulation than I did. G. M. D.

Honey as a Health-Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food", written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey". It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey the more honey they will buy.

PRICES, prepaid—Sample copy for a two-cent stamp; 50 copies for 70 cts.; 100 for $1.25: 250 for $2.25; 500 for $4.00; or 1000 for $7.50. Your business card printed *free* at the bottom of the front page on all orders for 100 or more copies. Send all orders to the office of the American Bee Journal.

Convention Proceedings

Papers Read at the Minnesota Convention

Held at Minneapolis Dec. 7 and 8, 1904

LATE FEEDING OF BEES

At our annual meetings there is some person who wants some light on the subject of feeding. It is to be inferred here when such person comes to put his bees into winter quarters, or brings them in from the out-yards, that, to his astonishment, some colonies are light in winter stores. How to supply them is what he wants to know.

The year that W. Z. Hutchinson was with us feeding was discussed. Mr. Hutchinson told how he did late feeding.

The fall of 1902 I made my first attempt at late feeding, using the Miller feeder. I had 4 "nukes" that contained late-reared queens, and were light in feed. Being desirous of saving the queens, I tried Mr. Hutchinson's plan. I prepared the feeders as follows:

Place the feeder upon a separate bottom-board, with a comb-honey super rim for the hive to rest on. If you haven't the rims you can make them; have them 5 inches deep. Heat the honey hot, 140 or 150 degrees; pour into the feeder what you need, and place a float in each compartment of the feeder; take the hive off the bottom-board it stands on and place it on the prepared board. Be careful not to disturb the bees before transferring, so that they will remain clustered and not be on the bottom-board. After placing them on the feeder, I usually raise one end of the hive a little and let it drop, so as to rouse them up and get them to work at once.

These "nukes" came through the winter in good shape, and 2 of them were in an out-yard of 50 colonies that gave me a crop of 8000 pounds of extracted honey last season.

The fall of 1903 I fed some 25 colonies the last of November and the forepart of December. They did well, with two or three exceptions. The past fall I have fed quite a number. This point I noticed, that unless the honey was hot—140 or 150 degrees—the bees did not take up the feed readily.

I usually wait about a day and a half, then I raise the hive up from the feeder by placing under each end strips about 2 inches square, and leave them for another day. Usually by that time the bees will be clustered on the frames, leaving the feeder clear of bees. Then transfer them to the bottom-boards.

I do the feeding in the cellar, as the weather is too cold to do feeding outside. A. D. SHEPARD.

Pierce Co., Wis.

SIZE OF HIVE RELATIVE TO THE HONEY-FLOW

During the time in which I have kept bees (about 10 years) I have been trying to figure out the size of hive best adapted to my locality. In doing this I have naturally come to some conclusions which might hold good in localities where the honey-flow is entirely different from that in my locality.

In the first place, this is the flow as I get it year after year: Dandelion and fruit-bloom just enough to keep up a fair amount of brood-rearing, but not enough to boom the colonies. White clover enough to boom the whole apiary, but not enough for surplus. Basswood in unlimited quantities; nothing afterward, not even enough to lay up stores to winter on.

Now, what kind of a hive would a bee-keeper of experience choose to fit into these conditions if he knew of them to begin with (which I did not)? Would he use the same appliances as he did in a clover country, or buckwheat country, or an alfalfa country? If he did, he would not be conducting his business intelligently. Good business men do not go into new ventures or new localities to start industries of any kind without figuring out the last detail. No more should the bee-keeper!

Now I think there are a few general principles which should govern a man choosing a size of hive, two of which I shall now mention.

First, you can not produce comb honey with a short but profuse flow, as in my locality.

Second, the shorter and more profuse the flow of honey the larger the hive-body, and, *vice versa*, the longer and steadier the flow of honey the smaller the hive-body.

Now try a small hive with a short, profuse flow for comb honey, as I did at first, not knowing any better, and the result will be that without a profuse flow from clover the bees will not work in the sections until the basswood begins to produce, then immediately they will swarm, and before they settle down to work the season is over, with sections about half filled. Such a result is a waste of time; even with large hives the result for comb honey with such a flow is no better, for the reason that while the swarming can be kept down to some extent, the bees will not work in the sections as long as there is room in the large hive, and the result will be half-filled sections in the end. Thus such a flow is impossible for comb honey under any circumstances.

Now having settled on extracted honey as the only successful form of production for our locality, which shall we use, large or small hives? I say large hives, by all means. With small hives the swarming will begin at the beginning of the main flow, and the settling process, if you try to keep them together, will consume half the period of flow. I say, keep them together, for what could you do with them divided at such a time? You have two almost worthless colonies for the work in hand.

Another thing, with this combination, should you be able to keep the swarm together, the hive-body will be so packed with brood that there will be little or no honey, which will make extensive feeding necessary every fall, which adds greatly to the cost of keeping the bees; besides, if sugar syrup is fed, the bees will not winter as well as upon good white honey that they have put in and themselves arranged.

Now these reasons I think sufficient to militate against the small hive for a short flow of honey. For the large hive, under the same conditions, there is to be said, first, there is plenty of room for brood and stores for winter, and no overcrowding just before or just at the beginning of the main flow. If up to this time they have not acquired the swarming fever, it is easy to keep them together until the end. Such a condition is ideal; they are ready to put into the field every available bee to gather honey during the short period of flow. After such a flow, when the honey is sufficiently ripened, the supers can be removed and the bees will still have room enough in a large hive if you do not wish to increase; should you wish to increase you can remove two frames of brood and stores from each hive and make one booming colony with stores enough for winter, from every four hives, and still leave a plenty in each of the hives so depleted.

I will say at this point that I consider a large hive one that has a capacity of 12 frames of the common dovetailed hive; anything less is a small hive.

Now, for a long, steady flow of honey, I can see why the whole system must be changed, and that small hives would be altogether the best to use. First, because you want the bees to swarm as early as possible, thereby getting two working colonies with two laying queens, and double the working force. The smaller the hive the quicker each (the parent colony and the swarm) will recover from the division of forces, and reach the surplus-storage period. With such a flow comb honey can be produced, because the crowding process, which is necessary for its production, will not cause a second period of swarming.

With a fall flow of honey, even with small hives, the bees are likely to have stores for winter, because the surplus arrangements for light honey having been removed, and brood-rearing falling off, plenty of storage-room is obtained.

Hennepin Co., Minn. D. D. LEONARD.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

A Discouraged Sister

I went into last winter with 7 colonies and came through with 6, losing my observatory colony. For the past 4 years our bees have profited us nothing (but experience). Last year I fed all fall and got them into winter and through in nice shape, but just when the fruit-bloom was opening we had a hard freeze, and since the clover came out, and there are acres almost white, we have had such cold, drenching rains that the bees have done nothing, so I have had to feed 2 colonies right when there was plenty of clover and poplar bloom. Do you wonder at me feeling discouraged? But I do not mean to give up. We will sit about the fires in June and buy sugar to feed the bees, and hope to catch buckwheat and fall bloom.

MRS. J. C. PARKER.

Monroe Co., W. Va., June 3.

Don't feel too discouraged; the season is not over yet. I distinctly remember just such a season a number of years ago. Plenty of white clover, weather cold and wet, bees starving in June, dragging out their brood ere we discovered their condition. Had to hustle with the feeding in order to save them. Things looked blue, and yet in spite of all we had a very good crop at the end of the season. So you see you may have a good crop after all. Let's hope.

* * *

Only Pollen—Finding Queens—Starters for Sections

I do not know as a subscriber is allowed to ask questions twice in one season, but as I am much puzzled and not a little worried, I am taking the liberty to impose on your kindness once more.

On May 8 I transferred a swarm of bees to a new hive to get the frames in such shape that they could be removed. In the new hive I put full sheets of comb foundation. Everything, apparently, was all right and in good shape when the transfer was made.

Last week one day I was examining the frames and looking for the queen-cells in the above-mentioned hive, when I noticed perhaps 12 or 15 cells among the brood that looked a blackish gray. It looked like a mixture of honey and pollen that had grown—well, not like milkdewed, but yet like milkdewed. Some were hard when I ran a toothpick down, and others were about the consistency of muck or dirt.

I was at once alarmed, and thought of foul brood, but upon consulting my "A B C of Bee Culture," I found foul brood was entirely different, and could not find anything like it described. Then I came to the conclusion that it was honey and pollen mixed and stored for future use. But the color was so dark, and they all appeared the same but one, which was red. This fact bothered me. I thought of inquiring about it, but thought I would wait a little and see if I could discover for myself what it was.

Yesterday, upon opening this same hive, I discovered about three times as much as there was the other day, and I am very much worried as one other hive contains a few of these cells.

Was the brood or eggs chilled in taking out the frames, or could the comb foundation have been manufactured from wax from a diseased colony? I must mention that some of the cells were about half full of the substance, and others would only have a little, but they all seemed a little sticky when a toothpick was run down. All cells were uncapped containing this substance. Have I any cause to be alarmed for fear of spreading among the other colonies?

I read a short time ago in the American Bee Journal how to divide the colonies so I would not have to bother catching swarms if busy. This struck me as an excellent idea, as I work during the day. But the thing that bothers me is how to find the queen moderately quick. All but one of my colonies are very large and strong, and yesterday—and only then by mere chance—was the first and only time I have succeeded in finding one of my queens. They are not clipped. I don't like to do it. Is there a way to find her quickly other than taking out each frame—center frames first—and hunting for her among the other bees? I have looked repeatedly in each hive I open to see her, and I do not seem to be able to find her. I know she is there as there are brood and eggs.

In my sections last year I put a square piece of starter. This year I put in a three-cornered piece, letting the point hang down. The bees seem to take to it much better. I make the piece about 1½ inches, or 1¾ inches on each edge. Is that a large enough piece of starter? I had only one comb crooked last year, and the starters were about 1 inch by 1½ inches last year, with the long end hanging. This may seem a simple question to "one who knows," but a beginner has to learn all these simple things.

I would like an answer as soon as convenient in my turn, as I am desirous of checking the mischief if it is one to be checked, and I should also like to know how to stop it.

June 13. MISS MICHIGAN.

Don't be worried about asking questions. You are at liberty to ask as many as you wish. We are always glad if we can be of service in helping to overcome your difficulties.

Now as to the cells you speak of. I think there is no reason for you to be alarmed, for, judging from your description, I should say it was pollen, and a very good thing it is for the bees, too, large quantities being used in brood-rearing. You will find that the quantity will steadily increase, and instead of being two colors there may be as many as half a dozen different colors. If you will notice closely I think you will find that there is much more of this substance in the outside frame, on one or both sides of the brood-nest; as the season is well advanced you will find these frames almost solid pollen.

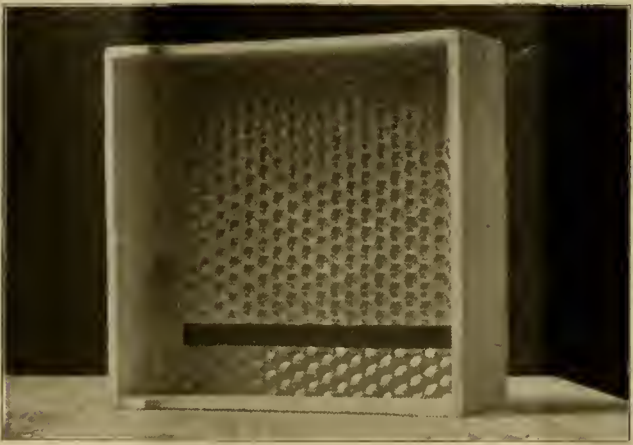
With regard to finding queens, I can speak from much experience, that particular part of the work generally falling to my lot, and sometimes I find from 25 to 100 queens in a day, doing more or less of it through the entire season. Practice is what you need; however, I might mention a few things that will help you.

First, give your bees just as little smoke as possible to keep them quiet. In opening your hive do it as quietly as you can, avoiding any sudden jar—anything that will alarm the bees and set them to running. This caution is more applicable to black bees than to Italians.

Remove the first frame, the one nearest you, and glance at each side of the frame for the queen. She is not very likely to be on the first frame, although you will sometimes find her there. Set this frame down outside the hive; this will give you room to handle the rest of the frames easily. Lift out the next frame and examine it, first looking over the farther side of the frame, as the queen naturally inclines to get away from the light. Continue thus with all the frames, moving them towards you as you return them. You will most likely find her the first time going over the frames, but if you miss her repeat the process, unless you have been so unfortunate as to start the bees running, in which case you will do best to close the hive and wait an hour or so or till another day. Even if the bees remain quiet, if you do not find her upon the first or second time going over, it may be economy to wait till another time, when she may be found very promptly. There are special ways of proceeding when a queen must be found at once, as by sifting the bees through an excluder, putting the combs in pairs, etc., but I have given you just the every-day plan by which I find queens by the hundreds.

The bees will fill a section with almost any kind of a starter, but after more experience you will probably prefer to have the section as full as possible of foundation.

If comb honey is to be shipped to market it is very desirable to have the comb well fastened at the bottom of the section. In order to secure this we use a bottom starter ⅝-inch deep and 3⅞ wide. The top starter is 3¼ inches deep and 3⅞ wide. The picture of a section thus filled is shown herewith.



TOP AND BOTTOM STARTERS IN A SECTION

Some Expert Opinion

What Proportion of Comb Sealed Before Extracting?

Ques. 27—*What proportion of an extracting comb is it advisable to have sealed before extracting?*

Mrs. J. M. Null (Mo.)—Fully three-fourths.

S. T. Pettit (Ont.)—All, or very nearly so.

Eugene Secor (Iowa)—Practically all of it.

R. C. Aikin (Colo.)—Three-fourths to all.

Morgan Bros. (S. Dak.)—At least three-fourths.

L. Stachelhausen (Tex.)—At least three-fourths.

Dr. J. P. H. Brown (Ga.)—I prefer to have the combs sealed fully one-half.

Dr. C. C. Miller (Ill.)—It probably pays to have 95 percent of the surface sealed.

Rev. M. Mahin (Ind.)—I prefer to have it all sealed, or nearly all. The more the better.

Wm. McEvoy (Ont.)—Three-fourths to all from clover. All if from basswood or buckwheat.

E. Whitcomb (Nebr.)—If you desire good, well-ripened honey at least two-thirds of the comb should be sealed.

C. P. Dadant (Ill.)—Sealing has but little to do with ripening. See whether the honey is thick or thin, and act accordingly.

N. E. France (Wis.)—That depends upon the weather. As a rule, the more sealed the better is the honey. Unripe honey is one of the causes of low prices.

Arthur C. Miller (R. I.)—Seven-eighths, at least. But honeys and climates make a great difference.

Jas. A. Stone (Ill.)—About all, or the honey will be thin and not keep well unless ripened by ventilation in a warm, dry place.

G. M. Doolittle (N. Y.)—The whole unless artificial evaporation is practiced. If left on the hive 2 weeks after sealing the honey is all the better.

Prof. A. J. Cook (Calif.)—It is better that it be pretty well capped over. That is always safe. To market any but fully ripe honey is always a mistake.

C. Davenport (Minn.)—Two-thirds or more, as a rule. But I have known combs to be nearly all sealed when the honey was thin and unfit to extract.

Adrian Getaz (Tenn.)—Enough to make sure that the whole is sufficiently ripe. I should guess not less than one-third under ordinary circumstances.

C. H. Dibbern (Ill.)—In a warm, dry time, when the honey is quite thick, I should not care much if it was capped or not; while in a wet time I should want it all capped.

J. A. Green (Colo.)—I prefer to have it all sealed. In a dry climate like that of Colorado, good honey may be secured without waiting for it to be sealed, but I doubt if much is gained by extracting sooner.

R. L. Taylor (Mich.)—That depends. If nectar is coming in rapidly it ought to be mostly capped; if slowly, it may be good honey before much capping is done. Something depends, too, upon the condition of the nectar, owing to the degree of moisture in the atmosphere.

O. O. Poppleton (Fla.)—This depends. Some honeys never get properly ripened even if all sealed and left in the hive for months. Other kinds are well ripened as soon as any is sealed. As a usual thing, however, except in extreme cases, at least ¾ of the comb should be sealed. More is better.

P. H. Elwood (N. Y.)—The more the better. You get the best quality for table use by leaving it on until the end of the flow. When it is not possible to do this extract when fairly well ripened—it may be when bees have just nicely commenced to seal, depending largely upon the weather.

E. D. Townsend (Mich.)—Our practice is to keep adding upper stories as they are needed clear through the season, then extract 10 days or 2 weeks after the season closes. In this way we get say 80 percent sealed before extracting. Even with this late extracting the sealed honey is very much superior to the unsealed.

J. M. Hambaugh (Calif.)—This depends upon the kind of honey. Linden or basswood honey should be sealed almost entire, while clover, Spanish-needle and many other kinds will not require so thorough sealing. The sages here in California, and alfalfa in Nevada, require but little sealing, at least that is my experience. The condition of the atmosphere plays an important part.

E. S. Lovesy (Utah)—If it is very thin it is best to leave it on till it is capped and ripened, but there are times when it is thick and ripe when the bee-keeper doesn't need to wait for it to be capped; while it will improve any and all honey to settle it in an open tank before canning. Thin honey, which may otherwise turn sour, will, as a rule, ripen all right if left in an open tank for a month, then the scum and all foreign matter should be skimmed off before canning.

G. W. Demaree (Ky.)—It depends upon the condition of the nectar when gathered by the bees. If the weather conditions are such as to favor the bees with good, "thick" nectar, a strip unsealed at the bottom of a part of the combs does not injure the quality of the honey. A good judge of the quality of honey need not make any mistake along this line. In the past few days I opened a jar of honey that was produced in the famous honey year, 1883—over 21 years ago—and it is as fine honey as was ever spread on bread.

E. E. Hasty (Ohio)—As a matter of choice it would be advisable to have it all sealed. If we extract mainly at the close of the season—and also in mid-season if we use combs enough, properly arranged—it is often possible to make a cheerful approximation to this ideal. Under some circumstances honey much less than half sealed may be nearly or quite as good as any. Something must be conceded to the impossibility of doing just what we desire; but a proper system and proper forethought would for the most part keep us out of such impossibilities. One of the worst things in connection with our craft is the wide-spread disposition to stretch terms and provisos and extract honey in a dreadfully unfit condition.

An Impromptu Sermon on Bees

The Rev. Dr. Linklater, of Stroud Green, who was the special preacher at Chaldron Church on Sunday, was driven from the pulpit by a swarm of bees which had taken possession of the nearest window.

From the lectern Dr. Linklater addressed the congregation on the subject of the intrusion of the bees, instead of preaching from the text he had selected.

Let them preach the sermon, he said, pointing to the bees. Watch them. They want to escape to the fields and flowers, to their home and honey, and the way is open, and manifest to all who look on. There is the aperture—the window wide and open, and nothing to prevent them escaping to the free breath of heaven. But, no, They will go their own way! They mean to escape through the glass. For any length of time they have been attacking the window, and defeat only lends energy to the renewed attack. They will not learn from experience. Within easy reach, a few inches above, there is the open window, and the free breath of heaven. But they have set their obstinate minds to go their way, and they will go no other. They will perish in the attempt. Already there are multitudes of their companions on the window-sill, who struggled and were defeated. These living ones will not learn from the dead. Poor buzzing bees, beating out your beautiful lives to no advantage, when the way to freedom is open, when you could be enjoying the life that God has given you! Is not this a pathetic picture of poor human bees who are thirsting for religious light, seeking that which is impossible in the way they seek it? The picture of the world of today, of so many splendid lives, is the picture of those imprisoned bees, seeking the right thing, but seeking it in the wrong way, and in their obstinacy preferring death rather than the life which is theirs through the open window—Jesus Christ.—British Bee-Journal.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to Dr. C. C. Miller, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Selling Section Honey by Weight

In advertising honey would it not be wisdom as well as strict justice to both the honey-producer and the purchaser of honey, to require the members of the League to sell section honey by actual weight, instead of selling less than 16 ounces, and exacting full-pound price for the same? As far as I know the custom now is to sell section honey by the section at full-pound prices, when both the purchaser and salesman know that very many sections fall short of a pound. This is driving many people to the extremity of letting the purchaser of honey severely alone. A number of people buy both chunk and extracted honey from me because they say they get the amount they pay for. Kansas.

Answer.—It is far from the universal custom to sell sections by the piece. Much section honey is sold at its exact weight. To sell section honey by the piece, with a full understanding on the part of the purchaser that he is buying it by the piece with no reference to its weight, is all right. To sell a section of honey with the understanding on the part of the purchaser that he is getting a pound when he is really getting less, is all wrong, even if the seller does not say in so many words that the section does weigh a pound. An honest seller would not allow any such misunderstanding. It may be more convenient to sell by the piece, but there is more exact justice in selling by the pound.

◆

Putting on Supers—Bees Deserting the Hive

1. Several times in this Department you have said that you have several supers on at a time, and you thought that you would lose by not using 2 or more. When do you put the last ones on? I have tried using one at a time, and also several at a time, and I can see little difference.

2. In the spring I had a colony leave the hive when they had some honey and brood. The next day they came back and I clipped the queen's wing, but they left the following day regardless of this. I don't think the queen went with them, though I could not find her. Do you think they were "crazy," or what? There were no mice, moth, etc., to bother them.

3. I have been thinking of dividing some of my colonies equally, putting 4 frames of brood and bees with the queen on a new stand, and letting those on the old stand rear a new queen. Would the bees on the new stand be likely to return to the old one? Missouri.

Answers.—1. When the first super is about half filled, and the harvest continues, a second is placed *under* the first. Then I continue giving fresh supers throughout the season just as often as the one last given becomes half filled. The empty super is put at the bottom until toward the close of the season, when it is not certain whether an additional super is needed or not, and then the empty super is put on top, where the bees can use it or not, as they like. The oldest super on the hive is always kept next over the one last given. Answering your question direct, you will see that the last super will be given toward the close of the harvest, which time varies in different years.

2. Bees sometimes have a craze for deserting their hives in spring, leaving plenty of brood and honey. I don't know why. Sometimes it looks as if the old bees had all died off rapidly, leaving so much brood on hand that the young bees remaining deserted on account of discouragement. Clipping the the queen has no effect in keeping bees in the hive; it only prevents her from going with them.

3. Yes, you may count on all the field-bees returning to the old location.

◆

Uniting Colonies

I have tried, in a limited way, the plan of temporarily uniting colonies with an excluder between, and it does not work satisfactorily for me. Inside of two weeks one or the other of the queens will disappear. In one case the lower colony was very strong, and the one put on top was weak, with brood in only 2 frames, and the queen in the lower strong colony was gone at the next examination. There was no fighting among the bees, but one queen seemed to be enough.

In uniting no smoke was used. They were simply set together and left to themselves. Have I omitted anything that should have been done to make the plan a success?

If it would work, colonies could be equalized very quickly by putting the lower one on a new stand when separating. Ohio.

Answer.—There does not appear to be anything lacking in your practice. According to the descriptions given by those who have been successful, all that is to be done is to set one colony over the other, an excluder between. Have others made a trial of the plan? and, if so, will they please report?

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Putting on Supers—Swarming

When is the best time to put supers on hives? Do bees necessarily accumulate on the outside of the hive before swarming?

I have asked these questions before but received no answer. Michigan.

Answer.—The best time to put on supers depends a little upon what you may desire. If you are anxious for increase through natural swarming, it may be best to delay putting on supers till after the harvest is under way, for crowding the brood-chamber with honey will have its effect in starting the bees into the notion of swarming. Indeed, it would make a more sure thing of swarming if no super should be given until after the bees have actually swarmed.

Generally, however, the desire is for honey rather than swarms. In that case a super should be given before there is any danger of crowding the brood-chamber with honey. A little too soon is better than a little too late. One way is to watch the flowers from which the harvest is expected, and put on supers as soon as they appear in quantity. In your region white clover is probably the thing for you to watch. Another way is to watch the condition of the brood-chamber, and put on supers when the brood-combs begin to be crowded with honey. The old rule was to give supers when white wax begins to be plastered on the upper parts of the comb; a good rule in most cases, but for those who prefer not to have any swarming (even though it may be a rare thing for the bees to respect their wishes) it is better to have supers on before the bees get so far as to secrete this extra wax.

I do not understand how it should be that your questions have not been answered, unless there has been some failure on Uncle Sam's part, and he is a very reliable old gentleman. All questions received are answered just as soon as possible. See "Send Questions on Time," page 404. See also "Putting on Supers," pages 297 and 393.

Reports and Experiences

Bees Doing Little Work

Bees are not doing much here just now. The first crop of alfalfa is cut and the weather is dry. They are killing drones, but I keep mine stimulated to breed, so when alfalfa comes again I hope they will begin work in earnest. G. Bohrer.

Rice Co., Kans., June 14.

Bees Wintered Poorly—Prospects Good

Bees did not winter well in this locality, mostly because of lack of feed. We had very little surplus honey last year, but there is a fine prospect for this season. The pastures are fairly white with clover now, and things never looked more promising for a large honey yield. I had 2 very large swarms on June 6 and 14. John Stotts.

Marion Co., Iowa, June 15.

Progressive and Up-to-Date

"Progress" and "Up-to-Date" seem to be the watchwords of the "Old Reliable," ever looking after the best interests of all concerned. It must require considerable hustling to get so much bee-information together for each weekly edition, and as you have subscribers in all stages of development, from the beginner to the expert, so the information necessarily must be varied. Extended articles on one subject by the experts no doubt suit the older heads, while we in the student class require to learn from the ground up. Success in apiculture like any other business, does not depend entirely upon one idea but upon a combination of circumstances. A. Burkholder.

Wayne Co., Mich., June 6.

An Old Bee-Keeper's Experience

It is my purpose to give an account of how I caught the bee-fever. If in your imagination you will go back with me to the year 1832, when I was 15 years old, living in Crawford Co., Pa., it was then my grandfather got me to work in the garden and watch his bees, while he attended court. He provided me with a ladder, a rope, a bell, and a straw skep, with orders to get the "king" in the skep should they swarm.

Well, one day while at dinner the boy called out "Bees swarming." I went to the yard, found them alighting on a pine tree some 15 or 20 feet high, and placed the skep on the ground under them, sawed off the limb, let them down by the skep, and by the time I got

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17A26t FREDERICKSBURG, VA.

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44Etf W. J. McCarty, Emmetsburg, Iowa

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down they were going in nicely. In the evening when grandfather came home the first inquiry was, "Did the bees swarm?" I was ready to say "Yes." He said: "Did you get them to alight?" I said: "Yes, they lit before I got the bell, and I hived them." "Well, you ought to be a bee-man," he then said.

That started the fever. When his friends came in he told the story and closed by saying, "Little John ought to be a bee-man." That was no antidote for the fever, so I asked him if he would sell me that swarm. He said he would if I would hoe corn for him. I asked him how long, and he said, "About 2 weeks, and I will teach you to make the skeps in the bargain."

It was the last week in May that we closed the bargain. I took the bees home, got my mother to take care of them when I was from home, and 5 years later I went to a home of my own. I started with 4 skeps. About this time a sawmill was started in the neighborhood, and I learned the carpenter and joiner trade, so I got to making box-hives, and quit the skeps.

About the year 1844 a man from Vermont came through Pennsylvania, selling "Week's Patent Hive"—a box-hive with a chamber for surplus honey. I got this hive and used it for 6 years, and increased to 30 colonies.

In the month of May, 1851, I sold my farm, made a sale of stock and bees, and left Pennsylvania, coming to Lafayette Co., Wis., June 6, and bought a farm. Then I started out to

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The St. Croix Valley Honey-Producers' Ass'n,
26A3t GLENWOOD WIS.

$12.25 to Buffalo, N. Y.,
and return, via Nickel Plate Road, from Chicago, July 8th, 9th, and 10th, with extreme return limit of Aug. 4th, by depositing ticket. Stop-over allowed at Chautauqua Lake points. Also lowest rates to Ft. Wayne, Cleveland, Erie and other eastern points. Three trains daily, with first-class equipment. Meals served in Nickel Plate dining-cars, on American Club Meal Plan, ranging in price from 35c to $1.00; also service a la carte. No excess fare charged on any train on the Nickel Plate Road. If contemplating an eastern trip, write John Y. Calahan, General Agent, 113 Adams St., room 298, Chicago, Ill. Chicago Depot, cor. Van Buren and La Salle Sts., the only passenger station in Chicago on the Elevated Railroad Loop.
13—25A3t

Please Mention Bee Journal when writing advertisers.

buy 2 or 3 milch cows, and while looking for them I ran across a man that had a number of colonies of bees in logs that he got in the woods. He said they were wild bees, but the honey was sweet. I gave him $5 for one, got it home, and it swarmed in a few days. Then I started with 2 colonies, in about a month from the time I sold out. So you see I still had the fever.

About the year 1860, when I had 100 colonies in box-hives, I heard of the Langstroth frame hive. I got a sample, made hives of that style, and transferred 60. I keep the best Italians I can get, and change every third or fourth year. I have a mill, make my own foundation and some for the neighbors. I aim to keep about 50 colonies over winter.

To keep back swarming I give plenty of room and shade.

To avoid absconding I give each new swarm a frame of brood of all ages, with frames of drawn comb as starters.

To avoid after-swarms I pick out all queen-cells but one on the 6th day after swarming.

To avoid robbing I keep strong colonies, and don't leave honey lying around to tempt them to rob.

I have about all the books that treat on bees, and I take the American Bee Journal, Gleanings in Bee Culture, and the Bee-Keepers' Review.

I have owned and handled bees for 73 years and still have the fever. JOHN CLINE.

Lafayette Co., Wis.

Bee-Keeping in Uinta Co., Utah

Bees are doing first-rate this season. I have had 22 swarms, all prime, and expect a good increase and also a good crop of honey. June 2 a swarm issued with 3 queens.

My winter loss was about 6 percent.

Utah is not like Missouri. We have a good governor, and our county commissioners are also all right in regard to helping the bee-men of Uinta County or in the State of Utah. Our commissioners stand ready to appoint a

JULY BLOODED STOCK
will give the champions of Duroc-Jersey swine a hearing. The entire number will bristle with money-making articles. Able contributors will consider the practical value of this breed; how to make money with it. Subscribe now. 25c a year.
Blooded Stock, Box 221, Oxford, Pa.

For Queens SEND TO
JOHN W. PHARR
Berclair, Tex.
He will furnish at same prices as last year: Tested, $1; Untested. 75c; 5 for $3.25; 10 for $6; 15 for $8.25; 25 for $12.50; 100 for $45. He breeds Goldens, Carniolans and 3-Band Italians. Also 1, 2, and 3 frame Nuclei, and full colonies. Prices given on application. Pharr pays the freight, and guarantees satisfaction on all Queens. To do justice and judgment is more acceptable with the Lord than sacrifice. —(Prov. 3: 21.) 6Atf

WE SELL ROOT'S GOODS IN MICHIGAN
Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.
M. H. HUNT & SON,
BELL BRANCH, WAYNE CO., MICH

DEATH TO LICE.

LOSS BY LICE
on poultry amounts to many times the cost of Lambert's Death to Lice—the sure preventive. Loss can be saved and profit made by its use. Frees sitting hens from lice without harming eggs or chicks. A trial 10c box will prove it. 100 oz., by express. $1.00.
O. K. STOCK FOOD CO.,
D. J. Lambert, Vice-Pres.
406 Monon Bldg., Chicago, Ill.

Millions of Sections
Shipping-Cases **TONS of COMB FOUNDATION**

Abundance of Bee-Smokers, Bee-Veils, Bee-Escapes, Bee-Hives, etc. Everything the bee-keeper needs. The best goods made. **Lewis' Goods in Indianapolis at Factory Prices. Orders received in the morning shipped same day.** **FINE ITALIAN QUEENS** mailed promptly from our breeder, here in the city. Untested, 75c; Select Untested, $1.00; Tested, $1.00; Select Tested, $2.00.

C. M. SCOTT & CO. 1004 East Wash. Street
INDIANAPOLIS, IND.

N.B.—A Porter Bee-Escape, or its equivalent, FREE with first order, if you say where you saw this ad.

Please mention Bee Journal when writing.

A Standard-Bred Italian Queen-Bee Free!

For Sending One New Subscriber.

As has been our custom heretofore we offer to mail a fine, Untested Italian Queen to the person who complies with the following conditions, all of which must be strictly followed:

1. The sender of a new subscriber must have his or her own subscription **paid in advance** at least to the end of this year

2. Sending your own name with the $1.00 for the Bee Journal will not entitle **you** to a Queen as a premium. The sender must be already a paid-in-advance subscriber as above, and the new subscriber must be a NEW subscriber; which means, further, that the new subscriber has never had the Bee Journal regularly, or at least not for a whole year previous to his name being sent in as a new one; and, also, the new subscriber must not be a member of the same family where the Bee Journal is already being taken.

We think we have made the foregoing sufficiently plain so that no error need be made. Our Premium Queens are too valuable to throw away—they must be **earned** in a legitimate way. They are worth working for.

We will book the orders as they come in and the Queens will be mailed.

Will you have one or more?

If you cannot get a new subscriber, and want one of these Queens, we will send the American Bee Journal a year and the Queen—both for only $1.50. Address,

GEORGE W. YORK & CO., CHICAGO, ILL.

We are...... Manufacturers of **Bee-Keepers' Supplies**

SPECIAL!

Closing out a large quantity of No. 2 SECTIONS as long as they last, at $3.50 per thousand.

Write for Catalog.

MONDENG MFG. CO.,
147 and 149 Cedar Lake Road, MINNEAPOLIS, MINN.

Please mention Bee Journal when writing.

county inspector at any time, when one is needed. We are not troubled with any kind of bee-diseases. We all guard against them by keeping our bees and our yards clean, and we also have the best bee-feeder there is made. There is no danger of robbers, and we can feed a yard of 200 colonies before breakfast any time. We don't have to open the hive, need no smoke, and drown no bees.

G. W. Vangundy.

Uinta Co., Utah, June 4.

Aphides and Honey-Dew

I am sending a twig cut from the soft-maple tree with a shell-bug (?) of some kind on it. The maples are covered with it in some parts of the country, and the bees tumble over themselves in the early morning and late evening—sometimes nearly up to dark—gathering the exudation or honey-dew. I have seen it many times before, but not to so great an extent as this summer.

We have a number of the different aphides that work on the trees, and plants of various kinds which produce "honey-dew" of some kinds, and sometimes the trees are dripping with it. A small green kind is at this time working on box-elder, and does almost every year, the sidewalk at times being wet with it.

Bees are in tolerably good condition, though there are many weak colonies. F. W. Hall.

Sioux Co., Iowa, June 12.

Do You Need Queens?
By Return Mail?

If so, we can fill your order with the best Queens that money can buy. Try our strain of 3-band Italians; they will not disappoint you with empty supers. Untested Queens, 75 cents; $8 per doz. Tested Queens, $1 each. Send for circular. **J. W. K. SHAW & CO.**
13Atf Loreauville, Iberia Par., La.

What Adel Bees Do

E. Milton, Mass., May 27, 1905.

Send me queen same strain as the one sent 1904. That queen proved the best queen I ever received. Her bees filled a super before May 15, 1905. Robt. Forbes.

All Tested Queens are $1 each.

HENRY ALLEY, Wenham, Mass.

Please mention Bee Journal when writing.

☞ The most attractive eastern excursion during the coming summer will be to Asbury Park, N. J., on occasion of the annual meeting of National Educational Association, July 3 to 7, inclusive, via the Nickel Plate Road and its connections, either the West Shore or Lackawanna Road, with privilege of stop-over at Chautauqua Lake points, Niagara Falls and New York City. Rate, $21.35 for the round-trip. Dates of sale, June 29 and 30 and July 1 and 2, with extreme return limit of Aug. 31, by depositing ticket. Patrons of this route may have the choice of a ride over the most interesting mountain scenery in New York and Pennsylvania, and through the celebrated Delaware Water Gap, or through the beautiful Mohawk Valley and down the Hudson River, which also includes the privilege of a ride on day line boat on Hudson River, between Albany and New York City, in either direction, if desired. No excess fare charged on any train on Nickel Plate Road. Meals served in Nickel Plate dining cars, on American Club Meal Plan, ranging in price from 35c to $1.00; also a la carte. Chicago Depot, La Salle St. Station, corner Van Buren and La Salle Sts. City ticket offices, 111 Adams St. and Auditorium Annex.

For further particulars, address John Y. Calahan, General Agent, 113 Adams St., Room 298, Chicago. 7—23A4t

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OF ALL KINDS.

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Beeswax Wanted at all Times.

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SHIPPING-CASES,

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York Honey —AND BEE SUPPLY— Co.

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(5 short blocks north of the C. & N. W. Ry. Passenger Station, using the Wells St. Cable Line from center of city to Ontario St.)

Long Distance Telephone—North 1559

Catalog and prices on Honey on application. If you want **Good Goods at Factory Prices and Prompt Shipment**, send your orders, or call on us.

BEESWAX WANTED—28c cash, or 30c when taking Bee-Supplies in exchange —delivered here.

"Combed" and "Extracted"

Alfalfa's Merits — Best Mortgage-Lifter Ever Known

Alfalfa is better than a bank account, for it never fails or goes into the hands of a receiver. It is weather-proof, for cold does not injure, and heat makes it grow all the better. A winter flood will not drown it and a fire will not kill it. As a borer it is equal to an artesian well; it loves water, and bores to reach it. When growing there is no stopping it. Begin cutting a 20-acre field; when your last load of hay is handled at one end of the field it is ready to cut again at the other end. For filling a milk-can, an alfalfa-fed cow is equal to a handy pump. Cattle love it, hogs fatten upon it, and a hungry horse wants nothing else. If your land will grow alfalfa you have the drop on dry weather. Once started on your land alfalfa will stay by you like Canada thistles or a first-class mortgage, but only to make you wealthier and happier. Evidences of the profitableness of alfalfa on irrigated land in the semi-arid regions multiply from year to year. Best results are obtained in

4th of July

Tickets will be sold at one fare for the round-trip, plus 25 cents, from Chicago, July 1st, 2d, 3d and 4th, to any point on the Nickel Plate Road. Return limit July 5th. Chicago Depot, La Salle and Van Buren Sts. City Ticket Offices, 111 Adams St., and Auditorium Annex. Telephones Central 2057 and 6172 and Harrison 2208.

11—25A2t

Bee-Supplies!

Discount for Early Orders

We carry a large stock and greatest variety of everything needed in the Apiary, assuring BEST goods at the LOWEST prices, and prompt shipments. We want every bee-keeper to have our FREE ILLUSTRATED CATALOG, and read description of Alternating Hives, Massie Hives, etc. WRITE AT ONCE FOR CATALOG

AGENCIES.—Trester Supply Co., Lincoln, Neb.; Shugart & Ouren, Council Bluffs, Iowa; Fulton & Ford, Garden City, Kan.; I. H. Myers, Lamar, Colo.; Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex. **KRETCHMER MFG. CO., Red Oak, Iowa.**

Dittmer's Foundation is the Best.

Send for Catalog, Samples and Discounts, and judge for yourself. 1904 output, 50 percent increase over 1903.

Full line of SUPPLIES, wholesale and retail.

Working Wax into Foundation for Cash a Specialty.
E. GRAINGER & Co., Toronto, Ont., Sole Agents in Canada for Dittmer's Foundation.

GUS DITTMER, Augusta, Wis.

STANDARD BRED QUEENS.

BUCKEYE STRAIN RED CLOVER, GOLDEN ITALIANS

By Return Mail. Safe Arrival Guaranteed.

PRICES.	ONE	SIX	TWELVE
Untested	$0.75	$4.00	$7.50
Select Untested	1.00	5.00	9.00
Tested	1.50	8.00	15.00
Select Tested	2.00	10.00	18.00

Select Breeders, each $3.00
Two-frame Nucleus and Red Clover Queen 3.00

THE FRED W. MUTH CO.,
No. 51 WALNUT ST., CINCINNATI, OHIO.

CAR-LOADS

of Lewis' B-Ware come to our city for distribution. We carry a large stock which enables us to make immediate deliveries. We invite your inquiries for prices, Catalog, etc.

Louis Hanssen's Sons
Davenport, Iowa.

The Rietsche Press

Made of artificial stone. Practically indestructible, and giving entirely satisfactory results. Comb foundation made easily and quickly at less than half the cost of buying from the dealers. Price of Press, $1.50—cash with order. Address,

ADRIAN GETAZ,
44Atf KNOXVILLE, TENN.

☞J. G. Goodner, of this State, writes me that he "prefers to pay $25 for a Rietsche Press than do without it."—A. G.

Please mention Bee Journal when writing.

Wisconsin Basswood Sections

And Prompt Shipments

Is what we are making for our customers.

— DOVETAILED HIVES AND SHIPPING-CASES —

We carry a full line of SUPPLIES. Ask for Catalog.

THE MARSHFIELD MANUFACTURING CO., Marshfield, Wis.

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G. B. Lewis Co's Goods at Factory Prices

We carry a most complete line of BEE-KEEPERS' SUPPLIES. Send for catalog. It's free. Foundation Cutter free with each order, if you state where you saw this ad.

13Atf **NORRIS & ANSPACH, Kenton, Ohio.**

Montana, Utah, Wyoming, and Idaho, by sowing in May or June.

DIRECTIONS FOR SOWING.

For dry farms, for raising seed, 6 to 8 lbs.; for hay, 8 to 10 lbs. Irrigated land, 10 to 16 lbs.

Be very careful to have the land well worked and leveled. The leveler the land the closer you can cut the hay. If sown with drill, put seed in from one to two inches. If sown broadcast sow evenly over the land, then drag once with light harrow. Will grow best in gravelly or sandy land. Heavy clay or alkali land does produce good alfalfa.—Selected.

The Wrong of Selling Unripe Honey

"Look out for number one." That's all well enough; but I tell you the man who wants all the happiness to be got out of this life needs to do a lot of looking out for others. The chauffeur who recklessly rides over people and frightens teams brings into disrepute the army of good people who ride in automobiles. The few evil-minded sluggers who are killing people in the Chicago strike are bringing into disrepute the whole scheme of organized labor. The man who puts on the market unripe extracted honey is doing a wrong to every honest man who produces honey.—[Just so. I am not sure but we ought to keep harping on this subject during the entire marketing season. The trouble is, the chaps who unload their bad stuff are just the ones who do not read the bee-papers. It would, perhaps, be well for bee-keepers to buy up some of these odd lots in order to prevent their getting on the market at all, either to depress prices, or, worse still, disgust the whole trade with any kind of honey.—ED.]
—Gleanings in Bee-Culture.

QUEENS

We have secured the services of one of the best Queen specialists in the U. S. Over 20 years' experience rearing Queens. Our Yard is stocked with select breeders from the best yards in America, and can send Queens by return mail.

Prices to Sept. 1, 1905:

Untested Queens	$ .75
Select Untested Queens	1.00
Tested Queens	1.50
Select Tested Queens	2.50

GRIGGS BROS.
521 Monroe Street,
TOLEDO, - OHIO.

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$21.35 to Asbury Park, N. J., $21.35

and return, via Nickel Plate Road. Tickets good via New York City. Dates of sale, June 29 and 30 and July 1 and 2, with extreme return limit of Aug. 31, by depositing ticket. Chicago City Ticket Offices, 111 Adams St. and Auditorium Annex. Depot, La Salle and Van Buren Sts., on Elevated Loop. 8—23A4t

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New .. Illustrated .. Catalog free; also sample copy of

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(Monthly, 50 cts. a Year.)

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Address,

THE W. T. FALCONER MFG. CO.,
JAMESTOWN, N. Y.

HONEY AND BEESWAX

When consigning, buying or selling, consult

R. A. BURNETT & CO.,
199 South Water St. Chicago, Ill.

— ITALIAN —

Bees, Queens and Nuclei

Choice home-bred and imported stock. All queens reared in full colonies.

One untested queen..... $ .65
One tested queen......... .90
One select tested queen.. 1.10
One breeding queen 1.65
One comb nucleus (no queen)................. 1.00

All grades ready to send by return mail.

Safe arrival guaranteed. For prices on quantities and description of each grade of Queens, send for free price-list. 100 or 200 lbs. of Brood Foundation. Send for sample and prices.

J. L. STRONG.
204 East Logan Street, CLARINDA, IOWA.

14Atf Please mention the Bee Journal.

FOR ITALIAN QUEEN-BEES

After June 1—Untested, 75c; Tested, $1.50; Select. $2 50: Breeders, $5 00. 2-frame Nucleus and Queen, $2.25. All orders will receive prompt attention. Address all orders to

B. T. GREGORY, Beeville, Bee Co., Tex.

Second Hand... **Comb Foundation Mills**

Honey Glassware

We have for sale a 6-inch and a 10-inch Second-Hand Comb Foundation Mill. Used scarcely any; good as new. If interested write for prices.

¾-lb. and 1-lb. Octagon **Tip-Top Glass Honey-Jars.** Prices: ¾-pounds, $4.50 a gross; 3 gross for $13. 1-lb., 1 gross, $5.25; 3 gross for $14.50. Address,

YORK HONEY AND BEE SUPPLY CO.
(Not incorporated)
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FREIGHT RATES FROM CINCINNATI ARE THE LOWEST,
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Prompt Service is what I practice.
Satisfaction guaranteed.
You will save money buying from me. Catalog mailed Free.
Send for same.
Discounts allowed on early orders. Take advantage by ordering now.

Book orders for GOLDEN ITALIANS, RED CLOVERS and CARNIOLAN QUEENS.

☞ For prices refer to my Catalog.

At Root's Factory Prices

C. H. W. WEBER CINCINNATI ...OHIO...
Office and Salesrooms, 2146-48 Central Ave. Warehouses. Freeman and Central Aves.

Honey and Beeswax

Chicago. June 19.—The little that sells consists chiefly of extracted and the market is a small one. Comb ranges from 12@12½c for the best white with off grades 1@3c less. Extracted, white, 5½@7c; amber, 5@6c. Beeswax, ready sale at 30c. **R. A. Burnett & Co.**

Cincinnati, June 2.—There is only a fair demand for honey at the present time. We quote amber extracted honey in barrels at 4¾@6c. according to quality. White clover extracted at 6½@8c. The comb honey market is practically closed for the summer. Beeswax, 29c.
The Fred W. Muth Co.

Boston, May 23.—Our honey market continues very dull, with very little movement to be noted. We quote fancy white at 14c; No. 1, 12½@13c. Extracted, from 6@8c, according to quality. **Blake, Scott & Lee.**

Philadelphia, June 21.—As the season advances, there is very little call for comb honey. In fact, no sales, and we make no quotations. Commission men are accepting any offer they can get for what little stock they have on hand. Extracted honey is in some demand. Possibilities of a big crop are holding prospective buyers back. We quote: Fancy white, 7@7½c; amber, 6@7c; dark, 5½@6c. Beeswax in good demand, 29@30c.

We are producers of honey and do not handle on commission. **Wm. A. Selser.**

Albany, N.Y., June 17.—The honey market here is very dull now. It is between seasons. Receipts and demand very light. Very little old crop carried over, and will be in good shape for new crop, which begins in August Quotations are nominal now. White comb, 12@14c; mixed. 10@12c; dark, 10@11c. Extracted, white, 6@6½c; mixed, 5½@6c; dark, 6@6½c. Beeswax, 28@30c. **H. R. Wright.**

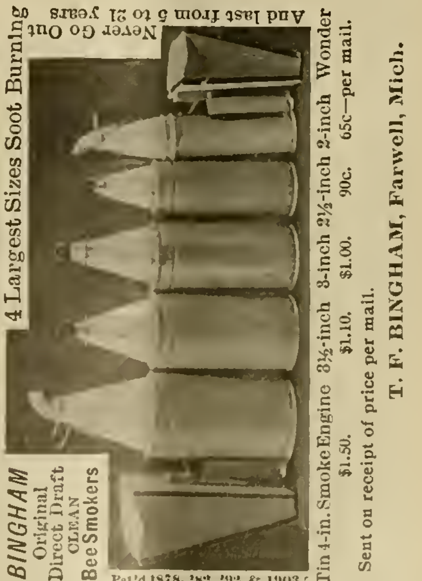
Kansas City, June 21.—There is very little comb or extracted honey on the market at present, but what there is is being quoted as follows: Fancy white comb, 24 section cases, $2 25 to $2.50; No. 1 white and amber, $1.75 to $2.00. Extracted, per pound, 4½@6c. Beeswax, 25@28c.
C. C. Clemons & Co.

New York, June 19.—The comb honey market is very quiet and we are hardly justified in making quotations, Some few lots are sold here and there at 13c for fancy, and 10@12c for lower grades, but no large blocks could be moved at these figures. There is still considerable of last year's crop unsold, part of which, no doubt, will have to be carried over until the fall. Extracted honey in fairly good demand. New crop California honey selling at 6½@7c for water-white, 6@6½c for white, and 5@5½c for light amber. Southern at 50@60c per gallon, according to quality. Beeswax somewhat declining; choice average stock selling at 29c.
Hildreth & Segelken.

Cincinnati, O., June 9.—There is no demand for comb honey on account of the warm weather. Extracted is in usual demand for this season of the year. We quote white clover at 7@8c: amber, in barrels, at 5¼@5½c; in cans, 5¾@6c. Beeswax, 28c. **C. H. W. Weber.**

San Francisco, May 31.—White comb, 1-lb. sections, 11@12 cents; amber, 8@10c. Extracted. white, 5½@6 cents; light amber, 4@5c; amber, 3@3½c; dark amber, 2½@3c. Beeswax good to choice, light, 27@29c; dark, 25@26c.

The ship Atlas, sailing Saturday last for New York, carried 236 cases extracted, reported to be Hawaiian Island product. Offerings of this year's California honey so far have not been large, and mainly by sample. The movement on local account is light.



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And last from 5 to 21 years
Never Go Out
BINGHAM Original Direct Draft CLEAN Bee Smokers
Pat'd 1878, '82, '92 & 1903
Tin 4-in. Smoke Engine $1.50. 3½-inch $1.10. 3-inch $1.00. 2½-inch 90c. 2-inch Wonder 65c—per mail.
Sent on receipt of price per mail.
T. F. BINGHAM, Farwell, Mich.

Otisville, Pa., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. Fred Fodner.

JUST ABOUT NOW

Is the time to be careful where you order your Bee-Supplies and what goods you order. Lewis' Goods will never disappoint you. They are standard and will go together rapidly and accurately. This means something

WHEN YOUR BEES ARE SWARMING

Bee-Keepers, Do Not Be Misled

By the so-called cheap prices. They mean poor goods, constant delays, trouble and dissatisfaction. A little more money expended on **LEWIS' BEEWARE** in the beginning will save you double the amount in the end.

WATERTOWN, LEWIS U.S.A

MILLIONS OF SECTIONS READY FOR YOU

As is customary with all large concerns we have agencies or jobbers in different parts of the United States, where our goods are carried in stock. If you are located near any of those named below it will save you time and freight charges to send your order to them. Where the distance is not so great from Watertown to the agency, these jobbers sell the goods at our regular list prices.

The following are distributing points for Lewis' Goods:

ENGLAND
E. H. Taylor, Welwyn, Herts.

CUBA
C. B. Stevens & Co., Havana.

CALIFORNIA
Paul Bachert, Acton.
California Lumber & Milling Co., San Francisco.

COLORADO
R. C. Aikin, Loveland.
Arkansas Valley Honey Producers' Association, Rocky Ford.
Colorado Honey Producers' Association, Denver.
Fruit Growers' Association, Grand Junction, Robert Halley, Montrose.

ILLINOIS
Dadant & Sons, Hamilton
York Honey and Bee Supply Co., 141 and 143 Ontario St., Chicago.

INDIANA
C. M. Scott & Co., Indianapolis.

IOWA
Adam A. Clarke, Le Mars.
Louis Hanssen's Sons, Davenport.

MICHIGAN
A. G. Woodman, Grand Rapids.

MINNESOTA
Wisconsin Lumber Co., Faribault.

MISSOURI
E. T. Abbott, St. Joseph.

OHIO
Fred W. Muth Co., Cincinnati.
Norris & Anspach, Kenton.

PENNSYLVANIA
Cleaver & Greene, Troy.

TEXAS
Southwestern Bee Co., 438 W. Houston St., San Antonio.

UTAH
Fred Foulger & Sons, Ogden.

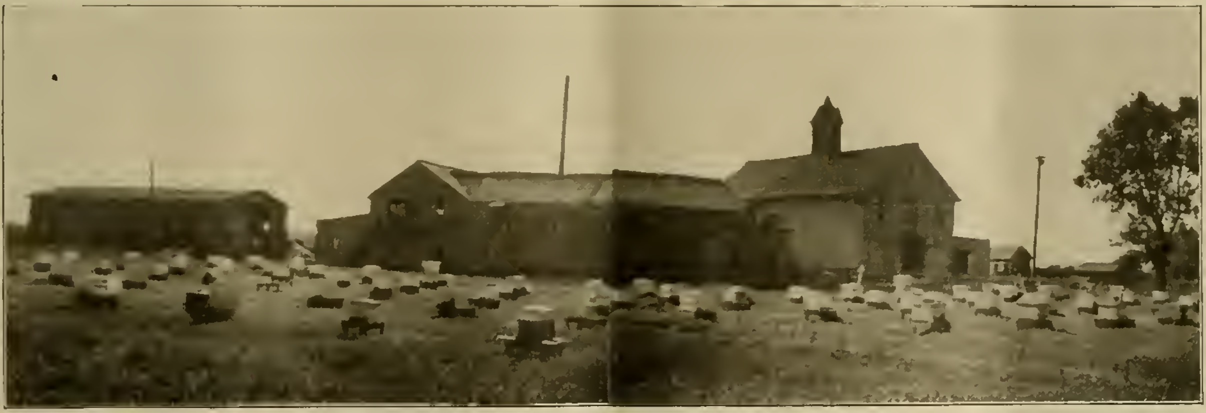
WASHINGTON
Lilly, Bogardus & Co., Seattle.

G. B. LEWIS CO. Manufacturers of Bee-Supplies **Watertown, Wis.**

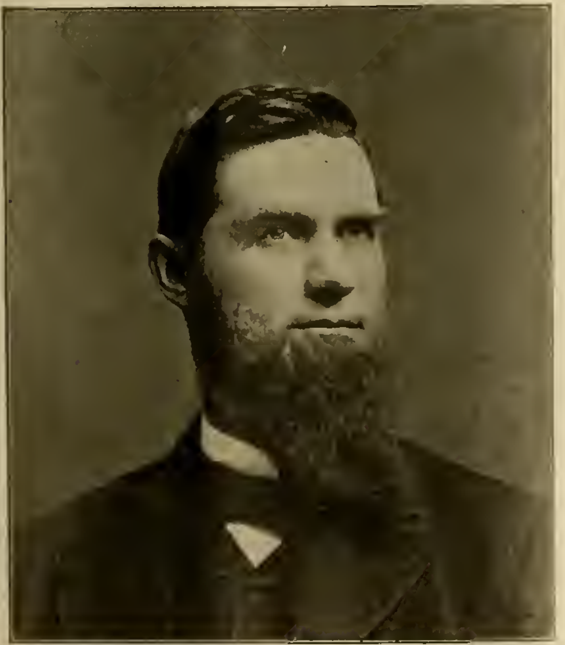
National Bee-Keepers' Convention at San Antonio, Texas,
Oct. 30, 31 and Nov. 1.

American Bee Journal

45th Year CHICAGO, ILL., JULY 6, 1905 No. 27



FACTORY AND APIARY OF KRETCHMER MFG. CO.
(See page 468)

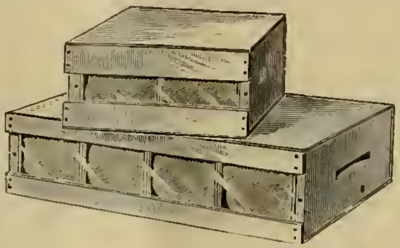


E. KRETCHMER.

RESIDENCE OF E. KRETCHMER.

HONEY CROP

Already the harvest has commenced. Now is the time to think of packages. Don't make the great mistake of neglecting this point. You may lose the entire profit of the year by shipping your honey in poor packages. Appearance counts in the market. When you buy **ROOT'S GOODS** you are sure of the best. Sections and Shipping-Cases; in fact, everything for the bee-keeper, can be promptly obtained at Root's Branches or Agencies everywhere.



No-Drip Shipping-Cases

Don't allow your Comb Honey to be sold at low prices on account of poor Shipping-Cases. Put your crop into **Root's No-Drip Cases** and it will reach the market in perfect condition, thus bringing satisfactory returns. Our Cases are made of selected basswood, with 2 or 3 inch glass front, which shows off the honey to the very best advantage. Below is a condensed price-list. Complete prices and particulars are found in our general catalog.

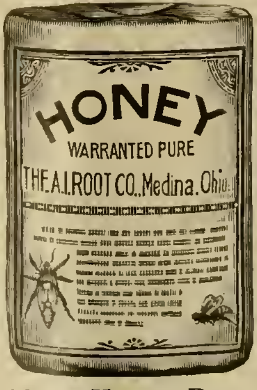
Shipping-Cases. Name and Size of Case.	Nailed each.	Price complete including 3-in. glass one side, nails and paper, in flat. 1	10	100	With 2 in glass instead of 3—per 100.	Without the glass, per 100.
12-in. 4-row for 4¼ section..........	30	25	2 00	$18 00	$17 00	$16 00
10-in. 4-row " "	30	25	2 00	17 00	16 00	15 00
12-in. 2-row " "	20	15	1 30	11 00	10 50	10 00
10-in. 2-row " "	20	15	1 20	10 50	10 00	9 00
16-in. 2-row " "	25	18	1 50	12 00	11 50	11 00
8-in. 3-row " "	20	15	1 30	11 50	10 75	10 00
6¼-in. 3-row " "	20	15	1 20	11 00	10 25	9 50
7⅛-in. 4-row for 4x5 "	30	22	1 80	16 00		14 00
7⅛-in. 3-row " "	25	20	1 40	12 00		10 50
9¼-in. 4-row for 3⅝x5 "	30	22	1 80	16 00		14 00
6¼-in. 3-row " "	25	20	1 40	11 50		10 00

Porter Bee-Escape

The great labor-saver. No well-regulated apiary can afford to be without it more than a smoker.

Price 20c each; $2.25 per dozen, prepaid.

Price with board, 35c; $3.20 for 10, not postpaid.


HONEY
WARRANTED PURE
THE A.I.ROOT CO., Medina, Ohio

Aikin Honey-Bags

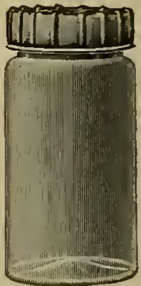
Don't fail to try this package. It is now an established success. No loss by breakage. Easy to fill. No package so cheap and attractive. Develop a home trade that will prove very profitable.

PRICE-LIST OF AIKIN HONEY-BAGS.

Capacity	Size	Price of 100	500	1000	Wt of 1000
1-pound bags	3½x5½	$ 65	$3 00	$ 5 50	10
2-pound bags.............	5 x7½	80	3 75	7 00	18
3½-pound bags...........	6 x9½	1 00	4 75	8 75	28
5-pound bags.............	7 x10	1 20	5 50	10 00	35
10-pound bags............	10x10½	1 50	7 00	13 50	45
Printing name and address extra......		30	75	1 00	

May be sent by mail at 18c per pound extra for postage and packing.

The Simplex Jar



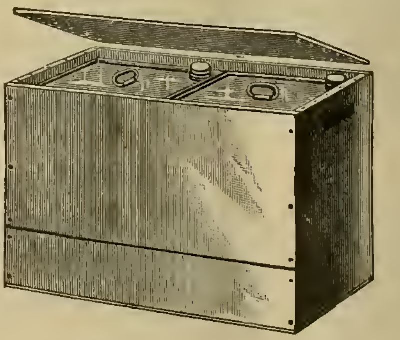
The handsomest glass package on the market. It's a package you need not be ashamed of, and will find its way beside the finest of the grocery shelves. Create a demand for your honey.

This is a new jar with glass screw-top and rubber gasket fitted to the taper screw on jar, which seals absolutely air-tight. Put up in re-shipping cases of 2 dozen jars each, with corrugated protectors.

Price $1.10 per case; 6 cases @ $1.05; 20 cases or more @ $1.00.

Honey-Labels

We print them. Write for our sample book.



5-Gallon Square Cans

The above cut shows the favorite package for shipping extracted honey. There is no shrinkage and consequent leaking; no taint to the honey from wood, as is so frequently the case with barrels and kegs. The cans, being made square, economize space, and are easily boxed. They are used exclusively in the far West. Take 4th class freight-rate.

PRICE LIST OF SQUARE CANS.

No. in a box.	Capacity of each can in gallons,	in honey.	Price of 1 box.	10 bxs.	Wt. of 1 box.
1	5-gal. can boxed.........	60 lbs.	$ 55	$ 5 00	10 lbs.
2	5-gal. "	60 "	85	8 00	15 "
10	1-gal. "	12 "	1 50	14 00	20 "
12	½-gal. "	6 "	1 50	14 00	20 "

Other sizes, other styles. Screw-cap Honey-Gates, Wrenches, etc., etc. Complete catalog free.

Catalog sent by Return Mail.

THE A. I. ROOT COMPANY
MEDINA, OHIO

BRANCHES: Chicago, 144 E. Erie St. Philadelphia, 10 Vine St. New York, 44 Vesey St.

ESTABLISHED IN 1861

THE AMERICAN BEE JOURNAL

OLDEST BEE-PAPER IN AMERICA

(Entered at the Post-Office at Chicago as Second-Class Mail-Matter)

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor | CHICAGO, ILL., JULY 6, 1905 | Vol. XLV—No. 27

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY

334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec05" on your label shows that it is paid to the end of December, 1904.

SUBSCRIPTION RECEIPTS.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows that the money has been received and credited.

ADVERTISING RATES will be given upon application.

National Bee-Keepers' Association

Objects of the Association

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00

General Manager and Treasurer—
N. E. FRANCE, Platteville, Wis.

☞ If more convenient, Dues may be sent to the publishers of the American Bee Journal.

The Honey-Producers' League

(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

MEMBERSHIP DUES

1. Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.
2. Any honey-dealer, bee-supply dealer, bee-supply manufacturer, bee-paper publisher, or any other firm or individual, may become a member on the annual payment of a fee of $10, increased by one-fifth of one (1) percent of his or its capital used in the allied interests of bee-keeping.

GEORGE W. YORK, Manager,
334 Dearborn St., CHICAGO, ILL.

Queen-Bee Free as a Premium

To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us ONE NEW subscription with $1.00 for the Bee Journal a year.

Editorial Notes and Comments

Prof. Benton Off for the Far East

Twenty-five years ago, in company with D. A. Jones, of Canada, Prof. Frank Benton started to the Far East in search of new races of bees, not returning to his native land until 11 years later. The introduction into this country of the Cyprian, Syrian, Palestine, and Carniolan bees followed. Now with Uncle Sam at his back, and as the accredited head of the Apicultural Branch of the Department of Agriculture, he starts in the same direction for a two-year trip, seeking more worlds to conquer. Besides obtaining queens from the Caucasus, he has his eye on the big bee of India, *Apis dorsata*, and any other new bee that may fall in his way. Neither will he slight any chance for something new in the way of honey-plants. Bee-keepers will hope for substantial gains from his efforts.

◆

Don't Save the Uncapping-Knife

If you extract before the bees have sealed the combs, you can save the time and labor of uncapping. But you will lose money by it. The honey will be of such quality that your customers will conclude they do not like honey, whereas if you leave it in care of the bees till all is sealed your customers will want more, and "children will cry for it." It is not, however, for the sake of avoiding the use of the uncapping-knife that most of the extracting of unsealed honey takes place, but for the supposed greater quantity of honey to be thus secured. To a large extent this is a delusion. If every bee-keeper should realize how little in weight he gains by extracting unripe honey, and how much more in proportion he loses in quality, he would hesitate thus to spoil the market not only for himself but for others.

◆

What is Good Honey Weather?

Quinby said that the honey-flow was at its best when farmers were just beginning to complain of drouth. Admitting this to be true, it is just a bit doubtful whether in the long run there is a gain in having such weather. When farmers begin to complain of drouth the drouth has already begun its injurious effect on the growth of honey-plants, and although the immediate effect may be an increased storing of nectar condensed to a greater extent than usual, the after effects in the way of checking plant-growth may more than counterbalance all the gain.

Speaking of white clover alone, the desideratum seems to be weather so hot that one can not find any spot cool enough to sleep at night, with plenty of moisture in the ground from previous rains. Does the man who grumbles at the interruption of the gathering by timely rains, really know what is for his own good?

◆

Townsend's Mixed-Super Plan

Editor Root is quite enthusiastic over O. H. Townsend's plan of having sections and extracting-combs in the same super. Dr. Miller, while not denying advantages in the plan, thinks it can be used successfully only when extracting-combs are new and white, because of the habit bees have of carrying bits of wax from the extracting-combs to finish sealing the sections.

◆

Studying the Wants of Beginners

The province of a bee-paper is to supplement the information gained from books of instruction on bee-keeping, not to take the place of such books. Lack of understanding this sometimes causes disappointment, and occasionally a subscriber writes after the manner of one who lately wrote:

> "I think a paper printed for beginners should state what should be done every month or less, and should not fill up its pages at this time of year telling how to winter bees. I don't receive much advice through the columns of the American Bee Journal in regard to each day's work, or each month's work."

It would certainly be a very desirable thing for a beginner to have explicit instruction given as to the work of each day in the season. It would, however, be a difficult thing to give such instruction. What would fit one locality would not fit another locality. What would be right for May 15 of a certain year in a given locality might be the right thing for June 1 of another year. Supposing, however, it could be easily done, it would have to be much the same for each year, and those who had been taking the Journal a year or more would object to having space thus occupied. It would be proper matter for publication in a book of instruction, which is expected to give general instructions. Even the books of instruction do not all count it feasible to give such plans of operation.

All this is said with no feeling of criticism against our correspondent. It is always desirable to know what our readers want, and just so far as practicable it is intended to gratify their desires.

◆

Gentleness of Caucasian Bees

A correspondent, after a visit to Prof. Frank Benton at Washington, writes with regard to a colony of Caucasian bees:

> "It was simply wonderful the way he handled them. I do not think anything that has been written has been overrated. He first began by taking them out and handling them the same as we do the ordinary bee; he then blew on them; shook them; kicked the hive, and put them to all the tests that you or I could think of to make an ordinary bee get up and sting. After all these tests they still clung to the frame and did not show the slightest intention to sting."

While many bee-keepers prefer bees having sufficient resentment in their make-up to keep at a respectful distance any one inclined to be light-fingered, there are others who would be glad to have bees without any sting. Next to a stingless bee is a bee with a sting it will not use upon its owner. Let us hope that these very gentle bees may at the same time distinguish themselves as honey-storers.

Miscellaneous News Items

Rev. John Dooly, of Berkshire Co., Mass., wrote an interesting article on the honey-bees for beginners, which appeared in The Courier, of Chatham, N. Y. If every bee-keeper who can do so would follow Mr. Dooly's example, and write an article on bees and honey for his local newspaper, it would doubtless help to increase the demand for honey, and also would afford an opportunity to correct the comb-honey misrepresentation that has appeared so often in print. If all would help in this matter we believe the tide would soon be turned in the direction of honey as a daily food.

◆

Kretchmer Mfg. Co.—For a long time we had been promising Mr. E. Kretchmer, of the Kretchmer Mfg. Co., Red Oak, Iowa, to visit him and their factory. Finally we found the opportunity to make the trip, starting from Chicago the night of June 12, and arriving there about 1:30 p.m. the next day.

JUSTUS C. KRETCHMER.

Red Oak is 450 miles west of Chicago, so we had a ride almost across both States of Illinois and Iowa. We arrived at Burlington, Iowa, about daylight, so from there on we could enjoy a view of the rich farming country with which Iowa abounds. It seems to us we never before had seen such abundant fields of white clover in full bloom. The tempting fragrance could be inhaled from the open car windows as we sped swiftly along.

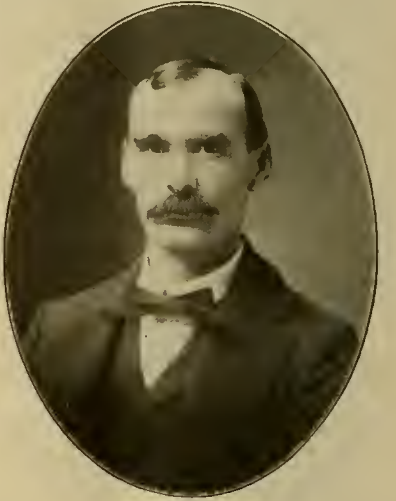
GEO. A. SMITH.

Mr. Kretchmer kindly met us with horse and buggy at the train as it rolled in at the Red Oak station. We rode through the town and on beyond about a half mile to his residence, which adjoins the factory, and all of them being located quite a distance from neighboring buildings.

The factory is on the left side of the road, as we drove to the entrance, and some 10 rods back, with a nice apiary of about 80 colonies of bees between, right on a carpet of white clover. We never saw quite so thick a mat of white clover in any apiary before. The bees had begun to work on the endless fields of clover just two or three days preceding our arrival, and were doing a hustling business. In fact, it seemed that all through the State of Iowa there was promise of a rich harvest of white clover honey.

Mr. Kretchmer located his factory in Red Oak 15 years ago, coming from Coburg, a few miles away, where he had taken up his residence over 30 years before. He came from Germany, and began to work on a farm at $8 a month. In 1857, we believe it was, he got his first bees, and in 1860 purchased an Italian queen of the first importation by S. B. Parsons, paying for her $150. At $8 a month it took quite a long time to pay for that queen. Italian queens are somewhat cheaper now, it seems.

Mr. Kretchmer is the oldest bee-supply manufacturer in America. He began to make hives by hand in 1864, on a carpenter's work-bench under a tree. From that humble beginning his business has grown until now there are 60 employes in the factory, divided into a day and night shift. We were surprised to learn that the Kretchmer Mfg. Co. now makes everything used by up-to-date bee-keepers excepting bee-hats, excluder zinc, and comb foundation. They used to make the last-named article, but now handle Dadant's brand. Their section-making capacity is about 25,000 per day. Their output last year of all kinds of bee-supplies was something like 60 car-loads. At the rate they were running when we were there we should think their total sales this year would exceed last year's.


CHARLES W. KRETCHMER.

An uncapping-fork is one of the new things offered. Mr. Kretchmer imports them for his trade.

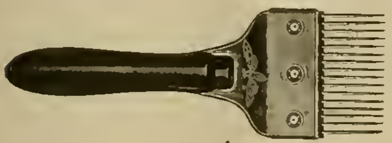
Mr. Kretchmer is founder and president of the Kretchmer Mfg. Co., his son, "Justus C.," is vice-president, and Geo. A. Smith, a brother of Mrs. Kretchmer, is the secretary. Another son, "Charles W.," is also in the business. There is still a third son, "Ray," who is expected to be a part of it a little later on.

The Kretchmer Mfg. Co. issues its full catalog also in the German language, the only one of its kind in the world.

Mr. and Mrs. Kretchmer have three sons and three daughters, all of whom are married, we believe, and also have nice homes. Mrs. K. is a motherly woman, a good, practical housekeeper, and takes a deep interest in the success of her husband and children.

We shall not soon forget the genuine cordiality with which we were received and entertained at the Kretchmer home and factory. May their success continue, and ever continue to be well-deserved.

Red Oak is an ideal city of 5000 inhabitants, *and not a single saloon.* It has 13 good church buildings, one of which, the Methodist—a new one—cost over $60,000, with a seating capacity of about 2000 people. It is said to have the largest number of $10,000 residences of any city in the West. That seemed a large saying, but as Mr. Kretchmer drove us up and down its delightfully shaded hills adorned with beautiful homes, we could but believe it was very near the truth. The buildings are all kept well painted, with dooryards nicely mown and tidied up. Red Oak certainly is a model residence place. And its people appear to take much pride in keeping up a thrifty and home-like appearance, which indicates prosperity and success.


UNCAPPING-FORK.

By the way, Red Oak has a "curfew *whistle*" at 9 p.m., instead of ringing a bell at that time for the children to go home. It is the whistle connected with the electric power and lighting plant which runs day and night.

We hope to visit Red Oak again some time. It is in itself an inspiration, and makes one feel like wanting to go there again.

Mr. W. P. Just, editor of the Sauk County (Wis.) News, called at this office June 24. Mr. Just is also a bee-keeper, and takes great interest in everything relating to the busy bee.

Colorado Fair Apiarian Exhibit.—Mr. Frank Rauchfuss, 1440 Market St., Denver, Colo., superintendent of the Apiary Department of the Colorado State Fair, to be held at Pueblo, Sept. 11 to 15 inclusive, sends us a copy of the list of apiarian premiums offered, which are as follows:

	1st	2d	3d
Italian bees and queen in single-comb observatory hives	$ 8 00	$5 00	$3 00
Carniolan bees and queen in single-comb observatory hives	8 00	5 00	3 00
Caucasian bees and queen in single-comb observatory hives	8 00	5 00	3 00
Largest and best display of bees of various races in observatory hives	10 00	6 00	4 00
Largest display of queens of various races in mailing-cages	5 00	3 00	2 00
Best case of white comb honey	3 00	2 00	1 00
Best case of light amber comb honey	2 50	1 50	1 00
Best and largest display of comb honey	10 00	6 00	4 00
Best display of special designs	3 00	2 00	1 00
Best dozen jars of white extracted honey	2 50	1 50	1 00
Best dozen jars of light amber extracted honey	2 00	1 50	50
Best and largest display of extracted honey	8 00	5 00	3 00
Best display of extracted honey in granulated form	3 00	2 00	1 00
Best 10 pounds of yellow beeswax	2 00	1 00	50
Best and largest display of beeswax	5 00	3 00	2 00
Best display of special designs in beeswax	3 00	2 00	1 00
Best display of honey-producing plants, mounted	3 00	2 00	1 00
Best display of fruits preserved in honey	3 00	2 00	1 00
Most instructive display of apiarian products and of the various uses made of honey and beeswax	20 00	10 00	5 00

All honey and beeswax must be Colorado products.

Mr. J. A. Green is the assistant superintendent. Surely Messrs. Rauchfuss and Green should be able to get together a great apiarian exhibit if anybody could, for there are not two abler bee-keepers and general hustlers in all beedom.

Mr. Rauchfuss says: "We have now a larger list and better premiums than formerly, and hope to have a larger display than ever."

The way to keep up a good and liberal premium list is for honey-producers to show their appreciation by making a big display. And Colorado bee-keepers know how to do it, too. Write Mr. Rauchfuss for any further desired information.

Mr. Frank G. Odell, of Lancaster Co., Nebr., was a caller at our office recently. He has about 20 colonies of bees, and intends to increase to perhaps 100, then make a specialty of queen-rearing. In fact, he has already begun the work. And he will succeed.

Rev. A. R. Seaman, of Fayette Co., Pa., dropped in to see us June 24. He has about 40 colonies of bees, and is located in the great iron manufacturing region where there is a good deal of smoke and dust that is not conducive to the growth of honey-plants.

Mr. E. B. Gladish, secretary of the Leahy Mfg. Co., of Lafayette Co., Mo., wrote us June 26: "The honey crop has been good here locally so far this season. We had a nice rain to-day."

Contributed Special Articles

How to Treat Foul Brood by the Baldridge Plan

BY M. M. BALDRIDGE

The Baldridge plan of treating a foul-broody colony successfully is as follows:

1st. Open the hive of the diseased colony and cage the queen. The best time to do this is late in the afternoon or near sunset. Place the caged queen in the top of the foul-broody hive, and where the cage can be got at with as little trouble as possible.

2d. Bore a small hole—about one inch in diameter—in the front end of the foul-broody hive a few inches above the regular entrance, and fasten over it on the outside of the hive a Porter bee-escape. After the bees are through flying for the day turn the foul-broody hive half way around so the bee-entrance will face the opposite direction.

3d. Now go to some healthy colony and select one or two combs of brood well covered with bees, and place them in an empty hive and fill this hive with empty combs, frames of comb foundation, or empty frames, and set this hive on the stand of the diseased colony. The rear ends of both hives will now touch each other, or they may be a few inches apart. Now leave the hive thus say 2, 3 or 4 days, or long enough for the outdoor workers in the foul-broody colony to return to their old location. This they will do, of course, and they will then remain in the new hive having one or two combs of healthy brood.

4th. Near sunset of the second or third day take the caged queen away from the diseased colony and simply let her run into the entrance of the new hive.

5th. Now close the regular entrance of the foul-broody hive and all other exits except the one through the bee-escape. Then gently place this hive by the side of the new hive and close to each other, the closer the better, with both fronts facing the same way. Thereafter the bees that hatch or fly out of the diseased colony must pass through or out of the bee-escape, and as they can not return they must and will go into the new hive. By this means the new hive, in the course of 3 or 4 weeks, will secure all, or nearly all, the bees and brood that were in the diseased colony, and during this time, or for any length of time thereafter, no robber bees can gain entrance thereto and carry away any diseased honey.

This plan of treating foul-broody colonies prevents all loss in bees, brood, honey, or the building of new combs, and is a simple and practical way of treating the disease. In some respects the plan is a far better one than any other I have seen described.

My plan may be carried out in divers ways, but it is not always best to describe such and thereby confuse the reader. The entire plan is based upon the well-known fact that foul brood is a *germ* disease, and that the germs may be taken into a new hive by the bees filling their bodies with the diseased honey deposited in the foul-broody hive. The disease may likewise be taken into the new hive by the *nurse-bees*. My plan does away with all such danger, for when the diseased colony is left undisturbed over night the bees re-deposit all their honey, and on going out to work the following day they go out with empty bodies and return with healthy honey. All the *nurse-bees* will remain in the diseased colony, and before they pass out of their hive through the bee-escape all germs in their bodies will have been disposed of in nursing the uncapped brood in the foul-broody colony.

My plan of treating foul brood is not exactly a new plan, as it was outlined by me in 1897, page 333, in the Bee-Keepers' Review. Since that date I have treated a number of foul-broody colonies by my plan, and always with good success. I am advised that others have done likewise.

Kane Co., Ills., June 20.

Dodder or Love-Vine—Other Honey-Plants

BY PROF. A. J. COOK

I HAVE an interesting letter from Mr. B. S. Taylor, now of Riverside Co., Calif., but formerly of Michigan. Mr. Taylor has 400 colonies of bees, and has made quite a success in apiculture since coming to this State. He now calls attention to the fact that gold-thread, or dodder, is destroying much of the wild buckwheat—Erioginum fasciculatum, which is one of our much-prized honey plants of Southern California. I have noticed ever since I came to this section that this dodder was seriously menacing the very life and existence of our wild buckwheat, yet I think that it will take many years before it exterminates the plant, if it ever is able to do so.

This dodder is a plant of many names. It is known as dodder all over the country; as gold-thread here in California, and we often near it referred to as love-vine. These last names are quite appropriate, as it is thread-like in appearance, and it is golden-yellow in color. It twines about its victims in a very close, loving way, and though with no loving thought such would be suggested by its close embrace. It is known to science as Cuscuta Californica, and there are three other species (one C. subinclusa, which is very common), which are found in this county.

This dodder is a very interesting plant for three reasons: It is a parasite, which accounts for its color, as all plants that have not the green which comes from chlorophyl must depend upon other plants or organisms for their nutriment, and so sponge their living. This is the habit of dodder, and thus it is that Mr. Taylor rightly brings his plaint against this plant murderer.

This plant also interests us as it victimizes some of our best and most prized plants, notably alfalfa, which suffers greatly from its attack. Indeed, I know of no enemy that the alfalfa-grower more dreads. It is, on the whole, a worse enemy of this incomparable forage-plant than is the ubiquitous gopher or the destroying wire-worm.

The third peculiarity that attracts interest to this love-vine, is its life history, which is surely unique, and which may be truly "made to point a moral and to adorn a tale." Its tiny seed drops like other seeds to the earth, takes root after the manner of all proper seeds, and springs up with no peculiar feature except its exceptional color, which, in itself, is a threat and a promise of evil. It now stretches up its golden strands, entwines the luckless herb or shrub that promises companionship, and now loses connection with the earth, and draws all of its nourishment from the host that not only holds it up, but gives it its entire support. This is how the buckwheat suffers, and why Mr. Taylor is disturbed as he sees one of our best honey-plants sacrificed to support this grasping parasite.

In most of our works on botany, this plant is included in the morning-glory family—the convolvulaceæ. Some of our recent authorities put it in a separate family—cuscutaceæ.

We may describe dodder briefly as follows: Annual, leafless, parasitic herbs, with string-like twining golden stems that are entirely destitute of the green that comes of the presence of chlorophyl. The flowers are very small; in the present species hardly more than a line (1-12 of an inch) long, and are borne in clusters on the side of the slender stems. The calyx and the corolla are of the same color, the latter being deeply five-cleft. The corolla-lobes are slightly longer than the campanulate tube. There are five stamens inserted on the corolla-tube, but the scale-like appendages usually inserted below the stamens are absent in this species. The ovary is globular and two-celled, with two seeds in each cell. The seeds are small, irregularly rounded, and, as we see from the above, are very numerous.

As stated above, this plant is a great alfalfacide, and the form and size of the seed make it possible to avoid it. The alfalfa seed is crescent shaped, and not a little larger than is the dodder seed. Every one interested in growing alfalfa should possess himself of a good hand lens, and learn to detect the presence of dodder seed in case it is present with the alfalfa seed that he plans to use. In case he finds the intruder present, he must take great pains to screen it out. From the smaller size of the seed this only requires a little pains, and with the free use of the lens may be done very perfectly.

The method or eradication in the alfalfa meadow is not difficult of application, and will succeed with a fair trial. We have only to put straw over the patch, which, from the bright color of the gold-thread, is easily seen, and then burn. This better be done as soon as the dodder is discovered, and thus seed will not be formed. As the dodder is rootless we will destroy it all in this cremation of its host. If all would practice this method, and exercise care to screen all seed that contains the dodder seed, this pest might soon be banished from the alfalfa fields, and large amounts saved to the growers of this incomparable forage-plant.

In answer to Mr. Taylor regarding this pest in the bush, where it runs riot among the buckwheat, I can only suggest this same fire-and-torch method. If it will pay to take this pains we could soon very materially lessen the evil, and so keep this valuable honey-plant. It might pay well to do this, and surely it will be well to give the matter earnest consideration, as I have noticed, as Mr. Taylor has, the rapid increase of this pest along the roadsides about Claremont.

HONEY AND THE WEATHER.

We have been having very exceptionally cold, wet, foggy weather for this region. A few days ago we had a few very warm days, and the way the honey came in was most encouraging to the bee-keeper. Now for days it has been so cold that we were more comfortable with a daily fire, and the fogs were very pronounced each day. It was so cold that the bees ventured out but little, and, of course, the amount of honey gathered was very light. Now we are having it warmer again, and the bees are at work at a more lively pace, and we may expect a good harvest as the abundance of bloom is phenomenal. The black sage is now in full bloom, and white sage is just opening.

CALIFORNIA HONEY-PLANTS.

I have been noticing the bees at work the past few days, and marvel at the richness of our bee-forage. The peppers, both staminate and pistillate trees, are humming all the day through with the bees as they crowd the bloom with their presence. There are many mints that share with the sages the friendly, appreciative visits of the bees. The abundant horehound is now in full bloom, and I notice that it, as well as the black sage and the abundant salvias, is crowded all the day long with the honey-gatherers. Phacelia tanacetifolia, with several other species of the same genus, is swarming with the nectar-lovers. Several species of gilias are now in full bloom, one of which—Gilia capitata—has great heads of flowers, and bears beautiful blue pollen. I was greatly interested the first year I came here to see the novel sight of bees heavily laden with this blue pollen, and was not content till I had hunted out its source. I find that several of the gilias bear this, and I am glad to state that all of these gilias are good honey-plants.

BARREN FRUIT-TREES.

J. C., of Geneva, N. Y., asks my opinion why his pear-trees do not set any fruit. He adds that they blossom full, but fail to set almost entirely. I will soon give a full paper on this subject, but will only say that in such cases lack of pollenation is usually the explanation. With pears, especially, and there are so many other fruits of which this is equally true, cross-pollenation is often imperative to the production of a crop. It is always wise in setting orchards to mix varieties. Even granting it is better to grow just one kind of fruit, there should be a sparing admixture of other varieties, at least one tree in eight, if not in four. Care, too, should be exercised that the varieties blossom at the same time. It is true, however, that this cross-pollenation is not always necessary. The Bartlett pear is often entirely sterile to its own pollen, yet I have known rare cases where it was wholly a success under such circumstances. Probably season and climate have much to do with this.

Los Angeles Co., Calif., May 29.

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A Few Apiarian Notes and Comments

BY G. M. DOOLITTLE

"HOW do you pronounce s-t-i-n-g-y?" asked Prof. Comstock. The smart boy nearest the foot of the class stood up and said, "It depends a great deal whether the word is applied to a man or a bee."

"Go to the head, young fellow."

WHERE TO KEEP COMB HONEY.

To keep comb honey perfectly the temperature should never go below 70 degrees F. From 80 to 95 degrees is what should be aimed at during the daytime, and the room in which it is kept should be dry and airy, if possible. A dark room keeps the capping to the combs of a lighter color. Keeping honey in a warm room makes the body of it thicker and heavier. When thus kept, if there are any unsealed cells, the honey will become so thick in them that it will not run out, even if the combs are turned down on their sides. If the room is damp, and the temperature falls lower than 60 degrees, the honey takes on moisture, becomes thin, and eventually runs from the combs and sours. Therefore, always store honey in an upper dry room, and *never* in the cellar, as so many are prone to do.

STUDY YOUR LOCAL HONEY-FLORA.

There is no subject of more importance to the bee-keeper, nor is there one that gives him more pleasure than the study of the honey-producing flora of his locality. No matter whether they bloom in the garden, the field or forest, or perchance along the roadside; if bees gather nectar from them they at once become an object of interest and investigation. The question of bee-forage is one that every one engaged in bee-keeping should investigate, for upon the amount and duration of the honey-producing plants and trees in the vicinity of the apiary depends the success or failure of the enterprise.

In locating an apiary for honey-production, one should have an eye to the amount of bee-forage in reach of the location, for no amount of labor and skill in the manipulation of our bees will pay where it is wanting. Having the desired flora in our location, and then so manipulating our colonies that the maximum amount of bees comes on the stage of action just at the time when the flora producing the maximum amount of nectar is in bloom, our success is assured. And without the desired flora, we can not meet with the success we otherwise would, for planting and sowing for honey where Nature does not give the same in profusion, can not make up for what is lacking. It will help some, however, where our environments keep us in a place where Nature does not furnish flowers in profusion.

HOW BEES BUILD CELLS WITH EXACTNESS.

The question is asked, "How can so many insects occupied at once on the edge of combs where it is dark, as in a bee-hive, concur in giving them the common curvature from one extremity to the other, as is found in the comb of the honey-bee?" It is supposed that this direct mathematical work is done by actual measurement, as each bee has a square or rule to measure by, in the shape of the antennæ. All who have observed the antennæ of the honey-bee know that there is a joint in each, out toward its end. In building worker-comb, which is 5 cells to the inch, this joint is closed like a jack-knife, so that when the antennæ thus closed is straightened out on each side of the head, the folded joints just touch the walls of the cell, and thus each bee is enabled to work in harmony with every other bee in the hive, and we have every cell of worker-comb as nearly exact as the average carpenter can make a duplicate of the work of another carpenter.

In building drone-comb the antennæ are straightened out fully straight, so that they touch the walls of the cells when fully extended at the extreme outside points, and by so doing larger cells are made, or those numbering 4 cells to the inch, which is the size of cells in drone-comb; and these are as uniform as to size as are those of the worker pattern. In this we see the wisdom of a kind Providence, which placed within the bee an instinctive capacity as great, according to its wants, as is the reasoning capacity in man.

FINDING BLACK OR HYBRID QUEENS.

To find a black or hybrid queen often baffles an expert, to say nothing of the novice. Much care at the beginning is the great secret of success. If possible, let the work be done between the hours of 10 a.m. and 2 p.m., when the largest number of field-bees are generally out at work, so that the hive is not congested with bees.

Open the hive slowly without a jar, and use as little smoke as possible. Be very careful not to kill a single bee, for if bees are killed the colony is liable to resent it, this causing so much smoke to be used in quieting them that the whole mass is likely to be "stampeded," under which condition it is nearly impossible to find any queen of any race.

Having the hive opened, remove the comb next to the side of the hive nearest you first, and sit on the east side of the hive during the forenoon, and the west side during the afternoon, thus allowing the sunlight to strike the side of the combs next to the operator. As soon as the first comb is examined, set it in a box or empty hive, placing the same on the side farthest from you. On removing the second comb from the hive, glance down upon the side of the comb in the hive which was next to the one you have now raised before you look at the one you have in your hands. If the queen is on that side of the comb, she will immediately, upon the strong sunlight striking her, commence to run around the comb to get out of the light. If you do not see her at once (which you will be apt to do if she is there, as the strong light striking against the side of the abdomen as she is running, will arrest your attention as nothing else would), then look on the side of the comb you hold in your hands that is the farthest from you, as the queen is sure to be on one of the dark sides of the combs. If she is not seen here, set this comb in the box up against the one that you put in first.

Proceed in this manner till all the frames are taken form the hive and placed in the box, unless you find the queen sooner. If not found, proceed to look in any corner of the hive wherever you see little clusters of bees, for if the queen is very shy she may leave the combs and run down into the corners of the hive. Not finding the queen in the hive proceed to take the combs from the box in the same order you took them from the hive, and glance the combs over in the same way, and in nine cases out of ten any one should find any queen before the combs are all back in the hive again, even if the colony is composed of black bees in their purity, and the operator is only a novice.

As noted at the beginning, care at the start so as not to stampede the bees, is the great secret of success, and this coupled with a strong light and a knowledge of how any queen behaves under such conditions, gives you the key to the whole matter.

Onondaga Co., N. Y.

Convention Proceedings

Papers Read at the Minnesota Convention

Held at Minneapolis, Dec. 7 and 8, 1904

SELLING HONEY THROUGH GROCERS.

The methods of selling honey through the grocery trade, whether in cities or small towns, must be pretty much the same in all essential respects. It will hardly pay to attempt to sell honey from house to house, especially in cities. There is already too much of the peddling or canvassing business done there. It is becoming an unbearable nuisance to the house-keepers. So I take it that the best way for the honey-seller is to work through the grocers who are already established and are supplying families with other things for their tables.

At present honey is considered by consumers a luxury, or else is not bought on account of fear of its adulteration. In either case it will be necessary to do considerable educating. Honey should be used more, and will be when once the people come to know its value as a food, and also when they can be assured that they are getting the absolutely pure article every time they buy honey.

But one of the main questions is, How put up honey so that grocers will be induced to handle it? Of course it must be in suitable or convenient packages. Comb honey will always be retailed by the section, which usually weighs about one pound. And the price should be for the best grades, from 18 to 25 cents, depending upon the locality—or ability of the consumers to pay. People who think they can afford to pay 10 cents or more for a useless cigar certainly should not object to paying 25 cents a pound for honey.

Extracted honey, put up in neat labeled jars holding a pound each, should retail for at least as much as a section of honey.

It is very important that honey of always the same grade and flavor be bottled. If these characteristics are varied, the consumer's suspicions are at once aroused, and he thinks he is being swindled by an adulterated or mixed article. He does not know that different kinds of flowers produce different flavored honeys. Where a bee-keeper or honey-dealer has a mild-flavored honey, but of insufficient quantity to supply his demand year in and year out, he can buy a stronger-flavored honey to mix with the mild kind, and thus increase his supply, and with about the same flavor.

In order to do a bottling business of any magnitude, or where one bottles several tons of honey a year, it is necessary to be equipped to do it rapidly and well. A full equipment will cost about $100, which includes hot-water heater, a metal melting-box for 60-pound tin cans, and a combined mixing and filling tank with jacket for holding hot water. A firm with which I am familiar has such an outfit, and can bottle about a half-ton of honey a day.

This concern's melting-box holds 18 60-pound cans at one time, and the bottle-filling tank about 100 gallons. It also has a second filling tank holding about 50 gallons. This latter tank is used mainly for melting granulated honey that was in barrels. A barrel of honey is stood on end on a sheet of galvanized iron about 4 feet square laid on the floor. If the honey is not solidly grained, the edges of the metal sheet may be turned up, say two inches. After ending the barrel, it is all removed in pieces, except the bottom-end. The honey is then shoveled into the melting tank. This beats digging the honey out of the barrel. Emptied barrels are worth practically nothing, anyway, so they may as well be torn to pieces, and the honey shoveled, as mentioned. Perhaps the barrels could be sawed or broken up, so as to be burned in the heater, and thus be used as fuel for heating the water to melt the honey.

The heater and the melting tanks should be connected so that there can be a circulation of water through all of them at the same time, or arranged so that each can be disconnected at will.

The honey should be bottled and corked or capped hot, say as near 160 degrees as possible. But great care must be used not to let the honey stand long in the melting tanks at a high temperature. It should be bottled *at once*. If not, the flavor and color will be injured. If overheated, or allowed to stand too long at a high temperature, it becomes a dark amber, and somewhat bitter in taste. Of course such honey *can* be used for baking purposes or for making honey-vinegar, but even for baking I think that better honey would make better cakes and cookies.

Now, having the honey bottled, and nicely labeled, the next thing is to get it into the grocers' hands. Take a sample jar or bottle (several, if you have various sizes) and call on the grocer. Tell him your prices, and suggest at what prices the honey should be retailed. It is a good thing, also, to leave him a honey circular, giving directions as to the uses of honey and where to keep it properly. Tell him what day you will deliver whatever he orders, and try to have a fair-sized wagon-load *before* making *any* deliveries.

It is a good thing to make regular calls on the grocers, and see that they are kept supplied. Also, whenever you call leave a self-addressed card (authorized postal size) on which they can write their orders, affix a one-cent stamp, and then mail. Such cards are a convenience all around. If you have a telephone it is well to print your number on the card also.

Some honey-sellers have found it an advantage to have attractive honey show-cases which they *loan* to any grocer who will keep their honey for sale. Such case holds perhaps two or three dozen jars, and about as many sections of honey. The idea, then, is to load up a wagon with honey, call on the stores where the honey-cases are, and see that they are kept filled. This plan has worked well. It is rather expensive to start with, but as many grocers have no good place to put honey so that it can be seen by their customers, and also where it will be kept clean, a glass show-case is a good thing for all concerned.

An individual glass jar has been used with some success in the restaurant trade. It holds about two ounces of honey, and is also neatly labeled. The cost of the jar is about 2 cents. The jars can be returned after using, at one cent each. As many restaurants charge 10 cents for a serving of honey it will be seen that there is a profitable field for the individual honey-package for hotels and restaurants.

But what needs to be done *first* is to get into the heads of the consumers the fact that they can buy pure extracted honey; that comb honey is not made by machinery; that honey is the best sweet on earth; and that they ought to eat more of it, and cut out the glucose syrups and other questionable mixtures that are forever being palmed off on the public. These are matters in which every bee-keepers' association, as well as bee-keepers themselves, can help, and help mightily. We must all unite in *talking* honey, and also in getting newspapers to print items about honey. The National Bee-Keepers' Association should lead in this campaign, I think. It should prepare suitable matter for publication, and then its members and local organizations should see to it that every editor they know publishes it in his paper, even if it takes a little cash or several pounds of honey to induce him to do it.

I believe when the people of the United States once understand the honey question they will use our sweet in such quantities that bee-keepers will have to bestir themselves in order to supply the demand. Then the advice to "keep more bees" will be heeded more than it is now, for bee-keepers will see that there is a profitable outlet for their crops of honey, and that there is good money in the business.

I trust this convention will discuss this question fully. It means so much to every bee-keeper in the land. Just now there are bee-keepers who do not know how or where to dispose of their honey. In the good time coming such will not be the case. Honey-buyers will be hunting for honey—they will be calling on bee-keepers to send in their honey, and at a good price. May that happy day be hastened in its coming!

GEORGE W. YORK.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Some Sisters' Sayings and Doings

Over in England the sisters seem to have gotten the start of the brothers—at least their bees have—as appears from the following item in the British Bee Journal:

"Mrs. Wright would like to inform the editors of the British Bee Journal that she had a swarm of bees from one of her hives at noon on May 6."

This seems to have been the earliest swarm reported.

On the other hand, a sister in Australia seems to have come to grief from having been too slow, according to the following from the Australasian Bee-Keeper:

"Mrs. Amos Milford, wife of a fruit-grower, whose house and orchard are situated at Harcourt, Victoria, walked into the garden yesterday, and, as she did not return, her husband went in search of her. He was horrified to find his wife prostrate on the ground, her head and shoulders black with a swarm of bees, which had evidently attacked and settled on the unfortunate woman. The bees were driven off and medical assistance hastily summoned. Mrs. Milford, however, is suffering so greatly from pain and shock that her condition is regarded as very critical."

Does any sister live in the vicinity of Mad. Cawein, who can coach her a little on the matter of bees and rotten peaches before she writes another book of poetry? The Literary Digest, which calls her a poet of Nature, gives the following as a specimen stanza:

Bee-bitten in the orchard hung
  The peach, or, fallen in the weeds,
Lay rotting where still sucked and sung
  The wild bee, boring to the seeds
That to the pulpy honey clung.

"Stenog," of Gleanings, seems to think it is not entirely according to Nature "when we are called to watch a bee making its way by boring into a rotting peach lying on the ground." But, then, "Stenog" is not "a poet of Nature," and is not up on poetic license. Indeed, it is generally understood that he is not a license man at all, either high or low. He should remember, too, that this was a "wild bee," that had never had the ways of Nature trained out of it in a Danzenbaker hive. Neither was it a common peach, but one of the poetic kind that turns into honey. What a beautiful thought is expressed in the words,

.... "the seeds
That to the pulpy honey clung."

How plainly that brings before us the picture of the clinging nature of peach-seeds, clinging to the honey, "pulpy" honey at that! No, "Stenog" is not "a poet of Nature."

Bee Dress, Veil and Gloves

I do not know how other women bee-keepers dress, but after a number of years in the business I have settled down to pretty much one style of dress, and one kind of veil and gloves. In the first place, I tried wrappers—the usual kind with loose fronts—but for several reasons I found them unsuited to the work before me. First, they are too warm to admit of anything being worn over them, and not having the sleeves lined the bees would sting the arms and shoulders through the thin fabric of which summer wrappers are commonly made. Next, the loose front, even when belted down by girdle or apron, would drag down when obliged to stoop for a length of time over the hives, so that it quite seriously interfered with the free use of the feet at such times. Again, when carrying heavy hives and supers, the weight pressed against the dress would pull down this loose portion enough to almost trip one down, especially if obliged to travel over rough ground or through high grass.

For the above reasons, also because of their unwieldiness in the wash-tub and on the ironing-board, the wrappers were discarded and loose, unlined, bloused-waist suits adopted instead.

These suits are made of calico or gingham, with gored and neatly-fitted skirt which opens directly in front. If placket is properly made the closing will be practically invisible. The skirt is joined, by means of a narrow belt, to a carefully fitted bloused waist cut after the latest shirt-waist pattern. The waist is closed with buttons, the button-holes being placed close together. The neck is finished with a wide ruffle which falls well down over the shoulders. The sleeves, instead of being finished with cuffs, are simply hemmed and a rubber cord run into the hems. Over the dress I wear, when working in the apiary, a common dressing-sack made of flannelette or outing flannel. These suits are neat, easily made, and very easily laundered. They very closely resemble the two-piece shirt-waist suits so popular the past few seasons.

Veil and hat are made in one. The hat is usually a good quality of straw or cloth, such as the men wear in the fields. To the outside edge of the rim is sewed a wide, full veil of tulle or mosquito-netting, with face part of best grade of sewing-silk face-veiling. In the bottom of the veil is rubber cord or a round, smooth shoe-lace, put in "draw-string" fashion. The veil is drawn up close about the neck, under the ruffle of the neck of the dress, thus making a bee-proof combination here.

Gloves are of canvas or duck, such as are sold in country stores for 10 cents per pair. Sometimes old kid gloves are used, but these I do not like so well as the canvas. To the top edges are sewed the tops of heavy ribbed black hose, which are drawn well up over the arms, thus preventing any bees from getting under the sleeves. Equipped in this way one may work among the bees for hours in comparative comfort. This rig I have found light, cool, and effective—in fact, all that could well be expected of a bee-dress.

Slippers were once a favorite summer footwear, but since working in the apiary I have learned to wear high shoes. In fact, I wore the slippers once too often, getting badly stung about the ankles as a consequence.

But while for my own use I sew veil and hat together, for the men folks I make veils separate with rubber cord in both top and bottom hems. I frequently notice, however, that they use the combination in preference to the separate articles. It is well to have a number of each kind on hand for the accommodation of visitors or extra help, as the case may be.

A thing which one should try to do is to make all these beforehand, for when the rushing season is fairly on there is very little time for extra work of any kind. This is more essential when women do the work in the apiary than where this falls to the men, since in the latter case the women are still free to make or mend gloves and veils, and do any other similar jobs, while, in the former, time even for the most trivial task often can not be found. MRS. MILLIE HONAKER.

Vernon Co., Wis.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to DR. C. C. MILLER, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Probably Bee-Paralysis

What ails my bees? I have one Italian colony that has quite a lot of dead bees in front of the hive, and some are also crawling around in front of the hive. They seem not to be able to fly, and their intestines are full of a bad-smelling excrement. The brood is healthy and they are working well, but a good many on the entrance of the hive can not fly. Do you think that I would better burn it?

MICHIGAN.

ANSWER.—Don't think of burning. The trouble is probably paralysis, which is not likely to be very serious as far north as you are; although in the South it may be. You can try sprinkling thoroughly with sulphur, which O. O. Poppleton has found a cure. Dust the bees with it.

Non-Swarming Bees—Increase—Comb Over Top-Bars

1. I have 6 colonies of bees, and none of them has swarmed yet. My neighbors' bees swarmed a long time ago. I have mine all in box-hives, and one colony began to cluster on the front of the hive the first day of June, and has been clustering more or less ever since, but has not swarmed yet. What do you think is the trouble?

2. Will it do to build up nuclei and divide colonies in July?

3. My bees build combs on the top of the brood-frames and between the super. Is it because there is too much room between the frames and the supers? IOWA.

ANSWERS.—1. It is nothing strange; but without knowing particulars it is not easy to say just why one colony swarms and another does not. It is possible that your bees have more room, or younger queens, or that they are more shaded. Possibly your bees are of such disposition that they are not inclined to swarm; and, in that case, you are to be greatly congratulated. The one colony you mention may have been clustering out for want of room, yet with little disposition to swarm.

2. Yes, you can start new colonies in August, only the later you start them the less they can be left to themselves. For example, you might start a colony late in August by giving it rapidly frames of sealed brood with adhering bees, so as to fill up the hive.

3. You are likely to have at least a little building over top-bars no matter what you do. The more crowded a colony is, the more inclined to such work. If the space between top-bars and sections is more than ¼ inch, the trouble will be aggravated.

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Transferring—Bees Starting Queen-Cells to Supersede

1. May 27 I tried to transfer a strong colony from a large box-hive, No. 1. I turned the hive up, then set hive No. 2 on it, and smoked and hammered a lot of bees out into the hive. I know I got the queen. After this I set the hive back, aiming to drive again in 21 days. After 4 or 5 days I took a peep at No. 2, which was on full sheets of foundation, and found one frame with cells about half built, and eggs in them. Another had queen-cells started. After 4 or 5 days I took another peep, and found another frame with eggs in, also the one that had the queen-cells on it. On taking a good look I find from 1 to 4 eggs in a cell; more of them had 4 than had 1, but there were generally 2 and 3. I took the frame out and put it in a nucleus to see what will become of the cells. No. 1 should have been ready to drive again June 18, but the 13th a very large swarm issued from it. Now I am at a loss to know just when to drive again, or just what to do, as I want them in a frame hive.

2. Why should No. 2 want to rear a queen when there is already a good queen in the colony? ILLINOIS.

ANSWERS.—1. After making your drive you say you "set the hive back," by which I suppose you mean you set the old hive back on the old stand. That was a mistake. You ought to have put the driven swarm on the old stand and put the old hive on a new place. Then the driven swarm would have gotten all the flying force. As it was, you left the mother colony strong, and as soon as the first virgin queen was ready it sent out a swarm.

You will drive 3 weeks after the first drive, just the same as if there had been no swarming.

2. It is a more common thing than is generally supposed for bees to start queen-cells in a swarm soon after being hived, for the sake of superseding the queen.

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Ventilation of Hives

I use the Danzenbaker bottom-board, and have practiced, in a limited way, putting a piece of wire-cloth in the place of one-third or one-half of the bottom, sliding that much of the wooden bottom out. This is done for the purpose of giving ventilation across the bottom of the hive. Last year in no hive with such an arrangement did the bees cluster out evenings, while they did in the other hives. This wire-cloth produces about one inch more space beneath the frames, and sometimes comb is built below the bottom-bar. But the most serious drawback to the plan is that during hot days the bees cover the inside of the wire-cloth at the rear end of the hive, apparently frantically trying to get out, although the entrance at the front is wide open, ⅜ inch by width of hive.

It would seem as if the time and energy of several hundred bees was wholly wasted every day. Possibly a small outlet at the rear of the hive might relieve the situation.

Can you suggest any remedy? Is the ventilation worth the drawback? I suppose the light attracts the bees. I use this wire-cloth only between June 15 and Aug. 31.

MASSACHUSETTS.

ANSWER.—The ventilation is probably well worth the drawback. I don't know of anything better than your suggestion of a small outlet at rear of hive, unless it would be a large outlet. You perhaps think the proper place for the entrance is at the front, and that well-behaved bees should be satisfied with that. Well, now, you try giving a full entrance at the rear, and I prophesy that not a colony will use it as such, providing it is not given till June.

Reports and Experiences

Honey Crop a Failure

Honey is a complete failure in this locality. In some of my strong colonies the bees have not entered the supers, and some have starved since spring. V. H. TUBB.

Walker Co., Ala., June 20.

Worst Spring for Bees

This is the worst spring for bees I have seen. I have fed mine 500 pounds of honey since taking them out of the cellar, and have lost 7 colonies from being robbed, with entrances ⅔ closed. LEWIS LAMKIN.

Woodbury Co., Iowa, June 19.

Prices of Bee-Supplies

The first paragraph of that article, letter, or whatever it may be, by Mr. Hasty, on page 248, headed, "The Present Prices of Bee-Supplies," is a sort of puzzler to me. Why he doesn't want the price of sections any lower he doesn't explain. He gives us the impression that he believes it would be contrary to the spirit of Christ for bee-keepers to insist on getting them at lower prices than those given in the catalogs. I have read and believe the story of Jesus, from the immaculate conception to the resurrection and ascension, and find nothing in the wonderful record that requires me to love my neighbor *better* than myself. If it can be shown that the outside prices charged for sections afford the makers only a living profit, there would be justification for Mr. Hasty's contention that bee-keepers ought to pay catalog prices, but the fact that parties not conspicuous in the business are making and selling sections below these prices, is conclusive evidence that some folks are making some money they are not justly entitled to. That the people who are making and selling sections at lower prices than those made by great establishments are in the business for pleasure or health is not to be supposed. I am willing to give the other fellow all that is *justly* his due, and a little more, if

Tennessee Queens

Owing to the great demand for my TENNESSEE QUEENS for several seasons, and the quantity of standing orders from old customers, I decided not to advertise until my books were cleared of orders, and thus avoid disappointing customers.

I am now ready to fill orders by RETURN MAIL. Breeders used: Imported dark leather-colored Italian; my selections from light imported Italian; Moore's long-tongue; golden; Carniolan (mated to Carniolan drones in distant yard, and to Italian drones); imported Caucasian (lately received, mated for the present to Carniolan and Italian drones (after Aug. 1 to Caucasian drones).

Prices until Oct. 1.		After Oct. 1.		Tested—	
Untested 12 for	$6.00	Untested 12 for	$7.50	Each	$1.50
" 6 for	3.25	" 6 for	4.00	Breeders—	
" 1 for	.60	" 1 for	.75	Each	3 00

27A13t JOHN M. DAVIS, Spring Hill, Tenn.

"If Goods are wanted Quick, send to Pouder"

BEE-SUPPLIES

Root's Goods at Root's Prices

Everything used by Bee-Keepers.
POUDER'S HONEY-JARS. Prompt Service.
Low Freight Rates. ∴ ∴ ∴ Catalog Free.

Hoosier Strain Italian Queen-Bees by Return Mail

Untested Queen	$ .75	Select Breeding Queen	$5.00
Select Untested Queen	1.00	Best Imported Queen	5.00
Tested Queen	1.00	Fair Imported Queen	3.00
Select Tested Queen	2.00		

WALTER S. POUDER,
513-515 Massachusetts Ave., INDIANAPOLIS, IND.

Bee-Supplies!

Discount for Early Orders

We carry a large stock and greatest variety of everything needed in the Apiary, assuring BEST goods at the LOWEST prices, and prompt shipments. We want every bee-keeper to have our FREE ILLUSTRATED CATALOG, and read description of Alternating Hives, Massie Hives, etc. WRITE AT ONCE FOR CATALOG

AGENCIES.—Trester Supply Co., Lincoln, Neb.; Shugart & Ouren, Council Bluffs, Iowa; Fulton & Ford, Garden City, Kan.; I. H. Myers, Lamar, Colo.; Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex. KRETCHMER MFG. CO., Red Oak, Iowa.

You Save 1-4 on Sections

By buying from us. The quality of our BEE SUPPLIES is unchallenged. We use only the best materials in the manufacture of our Supplies. The advantages we have in location and the modern appliances for manufacturing same enable us to produce high-grade Supplies at nearly 25 percent less than competing houses. We will give you the benefit of this 25 percent. Don't take our word for it, but prove it by sending us a trial order. Satisfaction guaranteed or money refunded. Careful attention given to instructions.

JOHN DOLL & SON BEE-SUPPLIES
Power Building, MINNEAPOLIS, MINN.

THIS LIGHTNING Lice Killing-Machine

kills all lice and mites. No injury to birds or feathers. Handles any fowl, smallest chick to largest gobbler. Made in three sizes. Pays for itself first season. Also *Lightning Lice Killing Powder, Poultry Bits, Lice Murder, etc.* We secure special low express rates. Catalog sent free. Write for it.
CHARLES SCHILD CO.
401 Detroit St., Cleveland, Ohio

Please mention Bee Journal when writing.

HONEY-JARS.

For a limited time we offer No.25 Honey-Jars, porcelain cover, metal screw cap, holding one pound of honey net, one gross in case complete in 5-gross lots, $4.00 per gross; less quantities, $4.50 per gross, f.o.b. New York. If you want to secure some, let us know at once.

HILDRETH & SEGELKEN,
265 & 267 GREENWICH ST., NEW YORK, N. Y.
11Atf Please mention the Bee Journal.

If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published, send $1.20 to

Prof. A. J. Cook, Claremont, Cal.,

—FOR HIS—

"Bee-Keeper's Guide."

Liberal Discounts to the Trade.

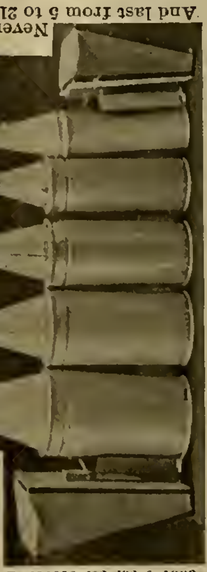
DEATH TO LICE.

LICE SAP LIFE

That's how they live and thrive. You can't have healthy, profitable fowls or stock and have lice too.

Lambert's Death to Lice

promptly kills all insect vermin and makes sitting hens comfortable. Sample 10c; 100 oz., $1.00 by express.
O. K. STOCK FOOD CO.,
D. J. Lambert, Vice-Pres.
406 Monon Bldg., Chicago, Ill.



BINGHAM Original Direct Draft CLEAN Bee Smokers

4 Largest Sizes Soot Burning

Never Go Out

And last from 5 to 21 years

Pat'd 1878, '82, '92 & 1903

Tin 4-in. Smoke Engine $1.50. 3½-inch $1.10. 3-inch $1.00. 2½-inch 90c. 2-inch Wonder 65c—per mail.

Sent on receipt of price per mail.

T. F. BINGHAM, Farwell, Mich.

OTISVILLE, PA., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. FRED FODNER.

Please mention Bee Journal when writing

COLUMBIA

ONE-PIECE SECTIONS

JUNE BARGAIN—Stock C.

We have 300,000 No. 2—4 1-4 x 1 7-8 open-top Sections to move QUICK at the following prices :

1000—$3.00	5000—$13.75
3000— 8.50	10,000— 25.00

These Sections are extra good grade of No. 2, and we know will please you. Send your order quick.

COLUMBIA MFG. CO.

ANTIGO, WIS.

FINE QUEENS

By Return Mail. From my 3 and 5 banded long-tongued Italians. Tested, $1; warranted tested, 75c; untested, 60c; no disease. I guarantee all Queens perfect, to arrive safely, and to give reasonable satisfaction. I have pleased others and can please you. May I ask for a trial order?

CHAS. M. DARROW

23Atf R. F.D. No. 1. MILO, MO.

Wanted The names and addresses of those in the U. S. who expect to buy honey in car or less than car lots during 1905.

The St. Croix Valley Honey-Producers' Ass'n,

26A3t GLENWOOD WIS.

$12.25 to Buffalo, N. Y.,

and return, via Nickel Plate Road, from Chicago, July 8th, 9th, and 10th, with extreme return limit of Aug. 4th, by depositing ticket. Stop-over allowed at Chautauqua Lake points. Also lowest rates to Ft. Wayne, Cleveland, Erie and other eastern points. Three trains daily, with first-class equipment. Meals served in Nickel Plate dining-cars, on American Club Meal Plan, ranging in price from 35c to $1.00; also service a la carte. No excess fare charged on any train on the Nickel Plate Road. If contemplating an eastern trip, write John Y. Calahan, General Agent, 113 Adams St., room 298, Chicago, Ill. Chicago Depot, cor. Van Buren and La Salle Sts., the only passenger station in Chicago on the Elevated Railroad Loop.

13—25A3t

Please Mention Bee Journal when writing advertisers.

I am able, and he claims something because of his necessities, but I believe that the spirit of "Live and let live," should be a part of the other fellow as well as of me.

When he comes to the matter of hives Mr. Hasty talks a *little* differently. He administers a very mild and harmless kick to the hinder parts of what seems to be taking shape in his mental vision as a bee-supply-makers' trust. Later, Mr. Hasty exhibits admirable fighting qualities when he sees this possible trust fastening a "yoke," which, of course, will be of no possible use till it has been adjusted to the necks of the bee-keeping world. He administers a most vigorous and well-deserved kick right in the stomach of the possible "octopus" in the presence and to the pleasure of applauding bystanders. These by-standers are saying for his encouragment, "Lay on, McDuff." I refrain from adding that part of the exclamation which follows the copula.

EDWIN BEVINS.

Decatur Co., Iowa.

Poor Prospects for White Honey

June 6 Henry Alley reported, "Too dry for clover." I can report from western Pennsylvania, "Too wet for bees." The weather is very warm, with a thunder-storm every afternoon, and often another during the night. There will be but little white honey in west-

For Queens SEND TO **JOHN W. PHARR** Berclair, Tex.

He will furnish at same prices as last year: Tested, $1; Untested. 75c; 5 for $3.25; 10 for $6; 15 for $8.25; 25 for $12.50; 100 for $45. He breeds Goldens, Carniolans and 3-Band Italians. Also 1, 2, and 3 frame Nuclei, and full colonies. Prices given on application. Pharr pays the freight, and guarantees satisfaction on all Queens. To do justice and judgment is more acceptable with the Lord than sacrifice. —(Prov. 3: 21.) 6Atf

Please mention Bee Journal when writing.

BLACK BREASTED RED GAMES—"The KING of Poultry." Large size, good layers of finest eggs. Hardy and fearless, the best all purpose fowl. Willow legs and Bay eyes. Illustrated circular. 25th year. **H. H. FLICK, MANCHESTER, MD.**

QUEENS

We have secured the services of one of the best Queen specialists in the U. S. Over 20 years' experience rearing Queens. Our Yard is stocked with select breeders from the best yards in America, and can send Queens by return mail.

Prices to Sept. 1, 1905:

Untested Queens	$ .75
Select Untested Queens	1.00
Tested Queens	1.50
Select Tested Queens	2.50

GRIGGS BROS,

521 Monroe Street,

TOLEDO, - OHIO.

Please mention Bee Journal when writing Advertisers.

Queens by Return Mail

The **Standard-Bred** kind, reared by some of the best queen-breeders in America, and warranted purely mated. Sent **by return mail** at these prices:

One Untested Queen for 75 cents; 3 for $2.10; or 6 for $4.00.

An Untested Italian Queen-Bee FREE as a Premium

For Sending One New Subscriber

As has been our custom heretofore we offer to mail a fine Standard-Bred Untested Italian Queen to the person who complies with the following conditions, all of which must be strictly followed:

1. The sender of a new subscriber must have his or her own subscription **paid in advance** at least to the end of this year.

2. Sending your own name with $1.00 for the Bee Journal will not entitle **you** to a Queen as a premium. The sender must be already a paid-in-advance subscriber as above, and the new subscriber must be a **NEW** subscriber; which means, further, that the new subscriber has never had the Bee Journal regularly, or at least not for a whole year previous to his name being sent in as a new one; and, also, the new subscriber must not be a member of the same family where the Bee Journal is already being taken.

We think we have made the foregoing sufficiently plain so that no error need be made. Our Premium Queens are too valuable to throw away—they must be **earned** in a legitimate way. They are worth working for.

If you can not get a new subscriber, and want one or more of these Queens, we will send the American Bee Journal a year and a Queen—both for only $1.50.

Address all orders to

GEORGE W. YORK & CO.
334 Dearborn Street, CHICAGO, ILL.

G. B. Lewis Co's Goods at Factory Prices

We carry a most complete line of **BEE-KEEPERS' SUPPLIES.** Send for catalog. It's free. Foundation Cutter free with each order, if you state where you saw this ad.

13Atf **NORRIS & ANSPACH, Kenton, Ohio.**

We are...... Manufacturers of Bee-Keepers' Supplies

SPECIAL!

Closing out a large quantity of No. 2 SECTIONS as long as they last, at $3.50 per thousand.

Write for Catalog.

MONDENG MFG. CO.,
147 and 149 Cedar Lake Road, MINNEAPOLIS, MINN.

ern New York or Pennsylvania. There is no prospect for a change for the better. The grass crop is simply immense, but whether or not it can be made into hay remains to be seen. The cultivator and hoe are lying idle, while weeds flourish in all hoed crops.

Warren Co., Pa., June 20. W. J. Davis, 1st.

You and Your Bees

WILL LIKE

"THE ELGIN HIVE"

A proven success Not an experiment

"The Elgin" is comprised of fewer pieces than any other knocked-down hive. No nailing required to put it together. Any man, woman or child can assemble The Elgin in a few minutes. Saves labor, trouble and racked nerves. No pattern, diagram or book of instructions needed in order to set it up.

Simplicity of construction is such that mistakes are impossible. Standard size brood-frames, supers and other accessories perfectly fit "The Elgin."

Material and workmanship unexcelled. Patent corners of metal make it air and water tight, and prevent warping. Made in 8 and 10 frame sizes. Special sizes if desired.

Let us figure on your **Bee-Supplies—Hives, Sections, Frames, Foundation, etc. GOOD GOODS. SATISFACTORY PRICES.**

Send to-day for illustrated circular and prices of "The Elgin." It will pay you.

The National Supply Co.
E. End Kimball St. Bridge, ELGIN, ILL.
27A3t Please mention the Bee Journal.

Do You Need Queens? By Return Mail?

If so, we can fill your order with the best Queens that money can buy. Try our strain of 3-band Italians; they will not disappoint you with empty supers. Untested Queens, 75 cents; $8 per doz. Tested Queens, $1 each. Send for circular.

13Atf **J. W. K. SHAW & CO.**
Loreauville, Iberia Par., La.

What Adel Bees Do

E. Milton, Mass., May 27, 1905.

Send me queen same strain as the one sent 1904. That queen proved the best queen I ever received. Her bees filled a super before May 15, 1905. Robt. Forbes.

All Tested Queens are $1 each.

HENRY ALLEY, Wenham, Mass.

We Sell Root's Goods in Michigan

Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.

M. H. HUNT & SON,
Bell Branch, Wayne Co., Mich

"DADANT'S FOUNDATION"
IT EXCELS.

WE GUARANTEE SATISFACTION.

BEE-SUPPLIES
OF ALL KINDS.

Beeswax Wanted at all Times.

DADANT & SONS, Hamilton, Ill.

Capital City Apiary!
Fine Italian Queens

Untested, after June 15, 75c; Tested, $1.00; Breeders—the very best, $5.00. Terms cash with order. Safe arrival and satisfaction guaranteed. **WALTER S. HOSS.**
1123 Blaine Ave., INDIANAPOLIS, IND.
27Atf Please mention the Bee Journal.

VIRGINIA QUEENS Italian Queens secured by a cross, and years of careful selection from red-clover queens and superior stock obtained from W. Z. Hutchinson. Untested queens, 75c; after June 15, 60c; tested queens, $1.00; after June 15, 75c; selected tested queens, $1 25; after June 15, $1.00. Write postal card for circular. **CHAS. KOEPPEN,**
17A26t FREDERICKSBURG, VA.

40-Page Catalog Free!
Full information regarding all kinds of BEE-KEEPERS' SUPPLIES, Best goods. Latest improvements. Danzenbaker Hives and Fixtures' Prompt shipments. JOHN NEBEL & SON SUPPLY CO., High Hill, Mo, 3Dtf

CONVENTION NOTICES.

Texas.—The Texas State Bee-Keepers' Association will hold its next meeting at College Station, with the Farmers' Congress, July 25, 26 and 27, 1905. These annual meetings are usually largely attended and are pleasant and profitable occasions. Visiting bee-keepers from other States are cordially invited to be present with us W. H. LAWS, Pres.
LOUIS H. SCHOLL, Sec.-Treas.

National.—The International Fair is to be held in San Antonio, Tex., Oct. 21 to Nov. 1. When this Fair is in progress there are very low rates in force on the railroads out for 600 or 700 miles. Then there are harvest excursions from the North on the 2d and 4th Tuesdays of the month. The 4th Tuesday in October comes on the 24th. Considering these facts, it has been decided to select Saturday, Oct. 28, as bee-keepers' day at the Fair. This will give ample time for members from the North to reach the city by starting the 24th. The regular sessions of the convention will begin Monday, Oct. *30, and continue three days.*

The headquarters of the National Association will be at the Bexar Hotel (pronounced Baer, long sound of a), corner of Houston and Jefferson Sts., and rates are only $1.00 a day, and up. The convention will be held at Elks' Hall, 125 W. Commerce St., only two blocks from the Bexar Hotel.

Flint, Mich. W. Z. HUTCHINSON, *Sec.*

STANDARD BRED QUEENS.
BUCKEYE STRAIN RED CLOVER. GOLDEN ITALIANS
By Return Mail. Safe Arrival Guaranteed.

PRICES.	ONE	SIX	TWELVE
Untested	$0.75	$4.00	$7.50
Select Untested	1.00	5.00	9 00
Tested	1.50	8 00	15.00
Select Tested	2.00	10 00	18.00

Select Breeders, each $3.00
Two-frame Nucleus and Red Clover Queen 3.00
THE FRED W. MUTH CO.,
No. 51 WALNUT ST., CINCINNATI, OHIO.

SECTIONS

Millions of Sections. You want quick delivery. We have the facilities for executing orders promptly. Remember that Quality is the first consideration about Sections. "Lewis' Sections" means highest quality. Do not be misled by low prices. A clean-cut, brilliant, white section enhances the price of your honey.

Shipping-Cases

Order your supply now. Pack your honey in cases before storing away; this keeps them in a bright, clean condition. We invite your inquiries. We can ship promptly.

Louis Hanssen's Sons
27A4t Davenport, Iowa.

Please mention Bee Journal when writing advertisers.

LEWIS' SECTIONS, SHIPPING-CASES.

—AND A FULL LINE OF—

BEE-SUPPLIES BY RETURN FREIGHT OR EXPRESS. SEND TO

H. M. Arnd, Manager.

York Honey —AND BEE SUPPLY— Co.

141 & 143 Ontario Street, CHICAGO, ILL.

(5 short blocks north of the C. & N. W. Ry. Passenger Station, using the Wells St. Cable Line from center of city to Ontario St.)

Long Distance Telephone—North 1559

Catalog and prices on Honey on application. If you want **Good Goods at Factory Prices and Prompt Shipment,** send your orders, or call on us.

BEESWAX WANTED—28c cash, or 30c when taking Bee-Supplies in exchange—delivered here.

Dittmer's Foundation is the Best.

Send for Catalog, Samples and Discounts, and judge for yourself. 1904 output, 50 percent increase over 1903.

Full line of SUPPLIES, wholesale and retail.

Working Wax into Foundation for Cash a Specialty.
E. Grainger & Co., Toronto, Ont., Sole Agents in Canada for Dittmer's Foundation.

GUS DITTMER, Augusta, Wis.

Send for Our 1904 Catalog and Price-List.

OUR **HIVES AND SECTIONS**

Are Perfect in Workmanship and Material.

By sending in your order NOW, you will SAVE MONEY, and secure prompt shipment.

PAGE & LYON MFG. CO., New London, Wis. U.S.A

Millions of Sections

Shipping-Cases TONS of COMB FOUNDATION

Abundance of Bee-Smokers, Bee-Veils, Bee-Escapes, Bee-Hives, etc. Everything the bee-keeper needs. The best goods made. Lewis' Goods in Indianapolis at Factory Prices. Orders received in the morning shipped same day. FINE ITALIAN QUEENS mailed promptly from our breeder, here in the city. Untested, 75c; Select Untested, $1.00; Tested, $1.00; Select Tested, $2.00.

C. M. SCOTT & CO. 1004 EAST WASH. STREET INDIANAPOLIS, IND.

N.B.—A Porter Bee-Escape, or its equivalent, FREE with first order, if you say where you saw this ad.

Mention Bee Journal when writing.

Wisconsin Basswood Sections

And Prompt Shipments

Is what we are making for our customers.

—DOVETAILED HIVES AND SHIPPING-CASES—

We carry a full line of SUPPLIES. Ask for Catalog.

THE MARSHFIELD MANUFACTURING CO., Marshfield, Wis.

Here is the Best of All

The Modern Farmer	$ .50
Agricultural Epitomist	.25
Green's Fruit Grower	.50
Poultry Gazette	.25
Gleanings	1.00
	2.50

All for an even **$1.00.** Without Gleanings, 50 cents.

THE MODERN FARMER,
ST. JOSEPH, MO.

Please mention Bee Journal when writing.

1 1-2 STORY

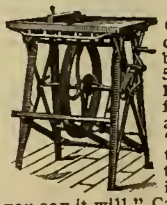
8-frame **HIVES**, either plain, or bee-way supers, $1.00. No. 1 Sections, $4.00 for 1,000. 24-lb. Shipping-Cases, $13.00 for 100; 12-lb., $8.00 for 100; 20-lb. Danz., $11.00 for 100.

Hives, Sections, Foundation,

etc., by the Car-Load One year's subscription to Bee Journal free with orders of $10 or over. Send for free list. BERRY BASKETS AND CRATES in stock. **W. D. SOPER,**
10Ctf RT. 3. JACKSON, MICH.

Please mention Bee Journal when writing.

BARNES' FOOT POWER MACHINERY



Read what J. I. Parent, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood-frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

Address, W. F. & John Barnes,
995 Ruby St., Rockford, Ill.

THE AMERICAN INSTITUTE OF PHRENOLOGY

Incorporated 1866 by Special Act of the New York Legislature, opens its next session the first Wednesday in September. For particulars apply to the Secretary, care of

FOWLER & WELLS CO.
24 East 22d Street, New York, N.Y.
27C2t Please mention the Bee Journal.

Italian Queens

FOR SALE

In all their purity, at the following prices: Untested (Red Clover) 75c; Tested, $1.25; Breeder, $5.00.

ELDON WOODARD
ASHVILLE, Chautauqua Co., N. Y.
27Ctf (Route 66)

The Rietsche Press

Made of artificial stone. Practically indestructible, and giving entirely satisfactory results. Comb foundation made easily and quickly at less than half the cost of buying from the dealers. Price of Press, $1.50—cash with order. Address,

ADRIAN GETAZ,
44Atf KNOXVILLE, TENN.

☞J. G. Goodner, of this State, writes me that he "prefers to pay $25 for a Rietsche Press than do without it."—A. G.

Please mention Bee Journal when writing.

BeeSupplies

Guaranteed Superiority!

Lowest ◦ Prices

We have been making Bee-Hives, Sections, etc., for over 20 years.

NEW.. ILLUSTRATED.. CATALOG free; also sample copy of

The American Bee-Keeper

(Monthly, 50 cts. a Year.)

The best magazine for beginners. (It has been published by us regularly for 15 years.)

Address,

THE W. T. FALCONER
MFG. CO.,
JAMESTOWN, N. Y.

— ITALIAN —

Bees, Queens and Nuclei

Choice home-bred and imported stock. All queens reared in full colonies.

One untested queen.....	$ .65
One tested queen.........	.90
One select tested queen..	1.10
One breeding queen	1.65
One comb nucleus (no queen)..................	1.00

All grades ready to send by return mail.

Safe arrival guaranteed. For prices on quantities and description of each grade of Queens, send for free price-list. 100 or 200 lbs. of Brood Foundation. Send for sample and prices.

J. L. STRONG.
204 East Logan Street, CLARINDA, IOWA.
14Atf Please mention the Bee Journal.

HONEY AND BEESWAX

When consigning, buying or selling, consult

R. A. BURNETT & CO.,
199 SOUTH WATER ST. CHICAGO, ILL.

Imported Carniolan Queens!

Price: Select Imported Queen direct from Carniola, $4 00. Write for rates for 3 or more.

RALPH BENTON,
27A2t 925 N St. N.W.. WASHINGTON, D.C.
Please mention Bee Journal when writing

Second Hand... Comb Foundation Mills

Honey Glassware

We have for sale a 6-inch and a 10-inch Second-Hand Comb Foundation Mill. Used scarcely any; good as new. If interested write for prices.

¾-lb. and 1-lb. Octagon **Tip-Top Glass Honey-Jars.** Prices: ¾-pounds, $4.50 a gross; 3 gross for $13. 1-lb., 1 gross, $5.25; 3 gross for $14.50. Address,

YORK HONEY AND BEE SUPPLY CO.
(Not incorporated)
141 Ontario Street, - CHICAGO, ILL.

Please mention Bee Journal when writing advertisers.

Headquarters for Bee-Supplies

ROOT'S GOODS

At Root's Factory Prices

COMPLETE STOCK FOR 1905 NOW ON HAND.
FREIGHT RATES FROM CINCINNATI ARE THE LOWEST,
ESPECIALLY FOR THE SOUTH,
AS ALL FREIGHT
NOW GOES THROUGH CINCINNATI.

Prompt Service is what I practice.
Satisfaction guaranteed.
You will save money buying from me. Catalog mailed Free. Send for same.
Discounts allowed on early orders. Take advantage by ordering now.

Book orders for GOLDEN ITALIANS, RED CLOVERS and CARNIOLAN QUEENS.

☞ For prices refer to my Catalog.

C. H. W. WEBER CINCINNATI ...OHIO...

Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

Honey and Beeswax

CHICAGO. June 19.—The little that sells consists chiefly of extracted and the market is a small one. Comb ranges from 12@12½c for the best white with off grades 1@3c less. Extracted, white, 5½@7c; amber, 5@6c. Beeswax, ready sale at 30c. R. A. BURNETT & CO.

CINCINNATI, June 2.—There is only a fair demand for honey at the present time. We quote amber extracted honey in barrels at 4¾@6c. according to quality. White clover extracted at 6½@8c. The comb honey market is practically closed for the summer. Beeswax, 29c.
THE FRED W. MUTH CO.

BOSTON, May 23.—Our honey market continues very dull, with very little movement to be noted. We quote fancy white at 14c; No. 1, 12½@13c. Extracted, from 6@8c, according to quality. BLAKE, SCOTT & LEE.

PHILADELPHIA, June 21.—As the season advances, there is very little call for comb honey. In fact, no sales, and we make no quotations. Commission men are accepting any offer they can get for what little stock they have on hand. Extracted honey is in some demand. Possibilities of a big crop are holding prospective buyers back. We quote: Fancy white, 7@7½c; amber, 6@7c; dark, 5½@6c. Beeswax in good demand, 29@30c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

ALBANY, N.Y., June 17.—The honey market here is very dull now. It is between seasons. Receipts and demand very light. Very little old crop carried over, and will be in good shape for new crop, which begins in August Quotations are nominal now. White comb, 12@14c; mixed. 10@12c; dark, 10@11c. Extracted, white, 6@6½c; mixed, 5½@6c; dark, 6@6½c. Beeswax, 28@30c. H. R. WRIGHT.

KANSAS CITY, June 21.—There is very little comb or extracted honey on the market at present, but what there is is being quoted as follows: Fancy white comb, 24 section cases, $2 25 to $2.50; No. 1 white and amber, $1.75 to $2,00. Extracted, per pound, 4½@6c. Beeswax, 25@28c.
C. C. CLEMONS & CO.

NEW YORK, June 19.—The comb honey market is very quiet and we are hardly justified in making quotations, Some few lots are sold here and there at 13c for fancy, and 10@12c for lower grades, but no large blocks could be moved at these figures. There is still considerable of last year's crop unsold, part of which, no doubt, will have to be carried over until the fall. Extracted honey in fairly good demand. New crop California honey selling at 6½@7c for water-white, 6@6½c for white, and 5@5½c for light amber. Southern at 50@60c per gallon according to quality. Beeswax somewhat declining; choice average stock selling at 29c.
HILDRETH & SEGELKEN

CINCINNATI, O., June 9.—There is no demand for comb honey on account of the warm weather. Extracted is in usual demand for this season of the year. We quote white clover at 7@8c; amber, in barrels, at 5¼@5½c; in cans, 5¾@6c. Beeswax, 28c. C. H. W. WEBER.

DENVER, June 26.—The demand for both comb and extracted honey is light at present, and there is enough of old stock on hand yet to last until the new crop comes in; the same is selling as follows: No. 1 white comb, per case of 24 sections, $2@$2.20; No. 2. $1.75@$2. White extracted, 6½@7½c per pound. Beeswax, 26c.
THE COLO. HONEY-PRODUCERS' ASSN.

SAN FRANCISCO, June 21.—White comb, 1-lb-sections, 11@—cents; amber, 8@10c. Extracted, white, 5½@—cents; light amber, 4@4½c; amber, 3@3½c; dark amber, 2½@—c. Beeswax, good to choice, light, 27@29c; dark, 25@26c.

Samples of new crop are on the market, with asking prices mainly within range of 4@5½c per pound in carload lots at primary points for amber to water-white extracted. Some handlers estimated this year's yield of California honey at 250 carloads. This quantity has been materially exceeded in some previous years, but it is doubtful if the crop reaches the above mark this season.

DOOLITTLE'S

Partner telling his best girl about the fine

Italian Queens

in their apiary. Don't order a queen till you get one of their circulars.

CHOICE BREEDERS
Now being sent out.

DOOLITTLE & CLARK,
11Dtf Borodino, Onondaga Co., N. Y.
Please mention Bee Journal when writing

We Can Ship You The Finest Sections on Earth

WHICH ARE

LEWIS' SECTIONS IMMEDIATELY

ON RECEIPT OF ORDER

G. B. LEWIS CO., Watertown, Wis.

ENGLAND
E. H. Taylor, Welwyn, Herts.

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COLORADO
R. C. Aikin, Loveland.
Arkansas Valley Honey Producers' Association, Rocky Ford.
Colorado Honey Producers' Association, Denver.
Fruit Growers' Association, Grand Junction, Robert Halley, Montrose.

ILLINOIS
Dadant & Sons, Hamilton
York Honey and Bee Supply Co., 141 and 143 Ontario St., Chicago.

INDIANA
C. M. Scott & Co., Indianapolis.

IOWA
Adam A. Clarke, Le Mars.
Louis Hanssen's Sons, Davenport.

MICHIGAN
A. G. Woodman, Grand Rapids.

MINNESOTA
Wisconsin Lumber Co., Faribault.

MISSOURI
E. T. Abbott, St. Joseph.

OHIO
Fred W. Muth Co., Cincinnati.
Norris & Anspach, Kenton.

PENNSYLVANIA
Cleaver & Greene, Troy.

TEXAS
Southwestern Bee Co., 438 W. Houston St., San Antonio.

UTAH
Fred Foulger & Sons, Ogden.

WASHINGTON
Lilly, Bogardus & Co., Seattle.

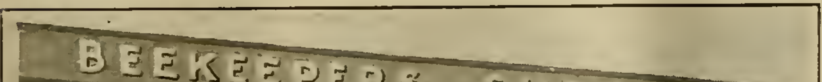
National Bee-Keepers' Convention at San Antonio, Texas,
Oct. 30, 31 and Nov. 1.

American Bee Journal

OUR TOIL DOTH SWEETEN OTHERS

WEEKLY—$1.00 A YEAR
Published by GEORGE W. YORK & CO., 334 Dearborn Street

45th Year CHICAGO, ILL., JULY 13, 1905 No. 28


BEEKEEPERS SUPPLIES
567
JOE NYSEWANDER APIARY SUPPLIES

MR. NYSEWANDER'S BEE-SUPPLY STORE (See page 486) JOSEPH NYSEWANDER

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY

334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec05" on your label shows that it is paid to the end of December, 1904.

SUBSCRIPTION RECEIPTS.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows that the money has been received and credited.

ADVERTISING RATES will be given upon application.

National Bee-Keepers' Association

Objects of the Association

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00

General Manager and Treasurer—
N. E. FRANCE, Platteville, Wis.

☞ If more convenient, Dues may be sent to the publishers of the American Bee Journal.

The Honey-Producers' League

(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

MEMBERSHIP DUES

1. Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.
2. Any honey-dealer, bee-supply dealer, bee-supply manufacturer, bee-paper publisher, or any other firm or individual, may become a member on the annual payment of a fee of $10, increased by one-fifth of one (1) percent of his or its capital used in the allied interests of bee-keeping.

GEORGE W. YORK, Manager,
334 Dearborn St., CHICAGO, ILL.

Queen-Bee Free as a Premium

To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us ONE NEW subscription with $1.00 for the Bee Journal a year. Now is the time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.

HONEY-JARS.

For a limited time we offer No.25 Honey-Jars, porcelain cover, metal screw cap, holding one pound of honey net, one gross in case complete in 5-gross lots, $4.00 per gross; less quantities, $4.50 per gross, f o.b. New York. If you want to secure some, let us know at once.

HILDRETH & SEGELKEN,
265 & 267 GREENWICH ST., NEW YORK, N. Y.
11Atf Please mention the Bee Journal.

IN THE HEART OF MICHIGAN

Within a hundred miles of me are over ¾ of the bee-keepers of Michigan. I am on the Pere Marquette R.R., which completely covers this region. Root's Goods, Factory Prices, Prompt Service, Low Freight. Send for Catalog.

GEORGE E. HILTON,
28A12t FREMONT, MICH.
Please mention Bee Journal when writing

"If Goods are wanted Quick, send to Pouder"

BEE-SUPPLIES

Root's Goods at Root's Prices

Everything used by Bee-Keepers.
POUDER'S HONEY-JARS. Prompt Service.
Low Freight Rates. ∴ ∴ ∴ Catalog Free.

Hoosier Strain Italian Queen-Bees by Return Mail

Untested Queen	$ .75	Select Breeding Queen	$5.00
Select Untested Queen	1.00	Best Imported Queen	5.00
Tested Queen	1.00	Fair Imported Queen	3.00
Select Tested Queen	2.00		

WALTER S. POUDER,
513-515 Massachusetts Ave., INDIANAPOLIS, IND.

STANDARD BRED QUEENS.

BUCKEYE STRAIN RED CLOVER, GOLDEN ITALIANS

By Return Mail. Safe Arrival Guaranteed.

PRICES.	ONE	SIX	TWELVE
Untested	$0.75	$4.00	$7.50
Select Untested	1.00	5.00	9.00
Tested	1.50	8.00	15.00
Select Tested	2.00	10.00	18.00

Select Breeders, each $3.00
Two-frame Nucleus and Red Clover Queen 3.00

THE FRED W. MUTH CO.,
No. 51 WALNUT ST., CINCINNATI, OHIO.

LEWIS' SECTIONS, SHIPPING-CASES.

—AND A FULL LINE OF—

BEE-SUPPLIES BY RETURN FREIGHT OR EXPRESS. SEND TO

H. M. ARND, Manager.

York Honey AND BEE SUPPLY Co.

141 & 143 Ontario Street, CHICAGO, ILL.

(5 short blocks north of the C. & N. W. Ry. Passenger Station, using the Wells St. Cable Line from center of city to Ontario St.)

Long Distance Telephone—North 1559

Catalog and prices on Honey on application. If you want Good Goods at Factory Prices and Prompt Shipment, send your orders, or call on us.

BEESWAX WANTED—28c cash, or 30c when taking Bee-Supplies in exchange—delivered here.

Please Mention the American Bee Journal when writing Advertisers

"DADANT'S FOUNDATION"

IT EXCELS.

*****

WE GUARANTEE SATISFACTION.

*****

BEE-SUPPLIES

OF ALL KINDS.

*****

Beeswax Wanted at all Times.

*****

DADANT & SONS, Hamilton, Ill.

COLUMBIA

ONE-PIECE SECTIONS

JUNE BARGAIN—Stock C.

◆

We have 300,000 No. 2—4 1-4 x 1 7-8 open-top Sections to move QUICK at the following prices :

1000	$3.00	5000	$13.75
3000	8.50	10,000	25.00

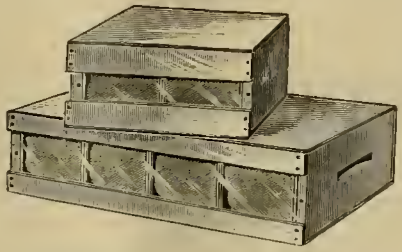
These Sections are extra good grade of No. 2, and we know will please you. Send your order quick.

COLUMBIA MFG. CO.

ANTIGO, WIS.

HONEY CROP

Already the harvest has commenced. Now is the time to think of packages. Don't make the great mistake of neglecting this point. You may lose the entire profit of the year by shipping your honey in poor packages. Appearance counts in the market. When you buy **ROOT'S GOODS** you are sure of the best. Sections and Shipping-Cases; in fact, everything for the bee-keeper, can be promptly obtained at Root's Branches or Agencies everywhere.



No-Drip Shipping-Cases

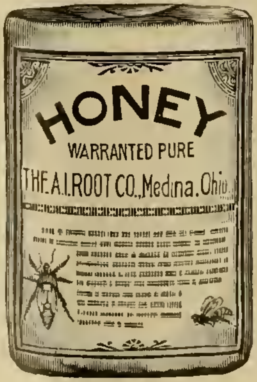
Don't allow your Comb Honey to be sold at low prices on account of poor Shipping-Cases. Put your crop into **Root's No-Drip Cases** and it will reach the market in perfect condition, thus bringing satisfactory returns. Our Cases are made of selected basswood, with 2 or 3 inch glass front, which shows off the honey to the very best advantage. Below is a condensed price-list. Complete prices and particulars are found in our general catalog.

Shipping-Cases. Name and Size of Case.	Nailed each.	Price complete including 3-in. glass one side, nails and paper, in flat. 1	10	100	With 2 in glass instead of 3—per 100.	Without the glass, per 100.
12-in. 4-row for 4¼ section..........	30	25	2 00	$18 00	$17 00	$16 00
10-in. 4-row " "	30	25	2 00	17 00	16 00	15 00
12-in. 2-row " "	20	15	1 30	11 00	10 50	10 00
10-in. 2-row " "	20	15	1 20	10 50	10 00	9 00
16-in. 2-row " "	25	18	1 50	12 00	11 50	11 00
8-in. 3-row " "	20	15	1 30	11 50	10 75	10 00
6¼-in. 3-row " "	20	15	1 20	11 00	10 25	9 50
7⅛-in. 4-row for 4x5 "	30	22	1 80	16 00		14 00
7⅛-in. 3-row " "	25	20	1 40	12 00		10 50
9¼-in. 4-row for 3⅝x5 "	30	22	1 80	16 00		14 00
6¼-in. 3-row " "	25	20	1 40	11 50		10 00

Porter Bee-Escape

The great labor-saver. No well-regulated apiary can afford to be without it more than a smoker.

Price 20c each; $2 25 per dozen, prepaid.
Price with board, 35c; $3 20 for 10, not postpaid.


HONEY
WARRANTED PURE
THE A.I.ROOT CO., Medina, Ohio

Aikin Honey-Bags

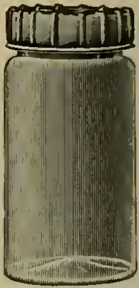
Don't fail to try this package. It is now an established success. No loss by breakage. Easy to fill. No package so cheap and attractive. Develop a home trade that will prove very profitable.

PRICE-LIST OF AIKIN HONEY BAGS.

Capacity	Size	Price of 100	500	1000	Wt of 1000
1-pound bags	3½x5½	$ 65	$3 00	$ 5 50	10
2-pound bags..............	5 x7½	80	3 75	7 00	18
3½-pound bags............	6 x9½	1 00	4 75	8 75	28
5-pound bags..............	7 x10	1 20	5 50	10 00	35
10-pound bags.............	10x10½	1 50	7 00	13 50	45
Printing name and address extra......		30	75	1 00	

May be sent by mail at 18c per pound extra for postage and packing.

The Simplex Jar



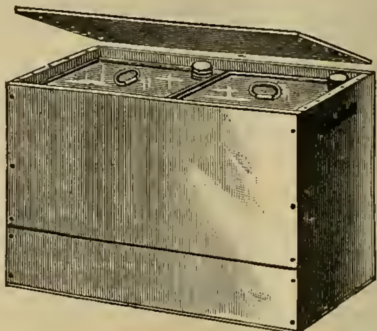
The handsomest glass package on the market. It's a package you need not be ashamed of, and will find its way beside the finest of the grocery shelves. Create a demand for your honey.

This is a new jar with glass screw-top and rubber gasket fitted to the taper screw on jar, which seals absolutely air-tight. Put up in re-shipping cases of 2 dozen jars each, with corrugated protectors.

Price $1.10 per case; 6 cases @ $1.05; 20 cases or more @ $1.00.

Honey-Labels

We print them. Write for our sample book.



5-Gallon Square Cans

The above cut shows the favorite package for shipping extracted honey. There is no shrinkage and consequent leaking; no taint to the honey from wood, as is so frequently the case with barrels and kegs. The cans, being made square, economize space, and are easily boxed. They are used exclusively in the far West. Take 4th class freight-rate.

PRICE LIST OF SQUARE CANS.

No. in a box.	Capacity of each can in gallons,	in honey.	Price of 1 box.	10 bxs.	Wt. of 1 box.
1	5-gal. can boxed.........	60 lbs.	$ 55	$ 5 00	10 lbs.
2	5-gal. "	60 "	85	8 00	15 "
10	1-gal "	12 "	1 50	14 00	20 "
12	½-gal. "	6 "	1 50	14 00	20 "

Other sizes, other styles. Screw-cap Honey-Gates, Wrenches, etc., etc. Complete catalog free.

Catalog sent by Return Mail.

THE A. I. ROOT COMPANY

MEDINA, OHIO

BRANCHES: Chicago, 144 E. Erie St. Philadelphia, 10 Vine St. New York, 44 Vesey St

Established in 1861
THE AMERICAN
BEE JOURNAL
Oldest Bee-Paper in America

(Entered at the Post-Office at Chicago as Second-Class Mail-Matter)
Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor
CHICAGO, ILL., JULY 13, 1905
Vol. XLV—No. 28

Editorial Notes and Comments

Bottom-Starters in Sections

On another page in this number, Dr. Miller makes a strong plea for the value of starters of comb foundation at the bottom as well as the top of sections. But it must not be forgotten that bottom-starters are one of the Doctor's own inventions, and every one is partial to his own baby. Do others who have tried them find the same advantages? It certainly is more work to put double the number of starters in a section, and there should be no small gain to warrant so much trouble.

Another thing: By his own confession Dr. Miller is troubled with poor seasons; in a good season is there any advantage—or, rather, a sufficiently paying advantage—in having bottom-starters?

To those not familiar with the matter, it may be well to explain that a bottom-starter ⅝ of an inch deep is fastened in the bottom of the section, and the top starter comes down to within about a fourth of an inch of the bottom one. (See illustration on page 456.)

Some beginner is likely to say, "Why not make the top-starter deep enough to come clear down to the bottom-bar of the section?" Because if that is done the foundation will stretch enough to allow it to buckle and bend over to one side, making the section a bulger. If a very small space is left to allow for stretching, the bees are likely, especially in a slow yield, to keep a space between the starter and the bottom-bar. The space between the two starters allows for the stretching, and the bottom-starter prevents any space being left next to the bottom-bar of the section.

◆

Comb Honey and The League

In the Chicago Daily News for June 21 appeared the following, which, we believe, would be a good thing to have published in every newspaper in the land:

Comb Honey

In March, 1905, there was formed in Chicago, and incorporated the following month in Illinois, an organization called The Honey-Producers' League. One of its objects is "to publish facts about honey and counteract misrepresentations of the same." It is hoped through the efforts of this League, with the co-operation of the leading newspapers and magazines of our country, to turn the tide in favor of the use of honey as a daily food, and also, as before stated, to endeavor to correct the popular delusion that comb honey is a man-made article.

Some 25 years ago a noted "professor," in order to work off a superabundance of "fun," as he termed it, published the statement that honey-comb was manufactured, then filled with glucose and sealed over, all with appropriate machinery. It seems that the press of those days was waiting to welcome such a yarn and forthwith scattered the news throughout the length and breadth of the land. It was so well done, and seemed to be so eagerly swallowed by the public, that its unfortunate repetition has been going on during all the years. The very best of metropolitan dailies of largest circulations, have been deceived by the comb-honey misrepresentations, and have unwittingly aided in its further dissemination.

Almost for the last 20 years there has been a standing offer of $1000 made by a reputable firm for just one pound of the so-called manufactured comb honey. But if there is any such article in existence, strange to say no one has as yet proved his claim to the reward offered. The fact is, comb honey has never been made except by bees, as otherwise it is a mechanical impossibility.

It is true that the liquid honey—honey taken from the original honey-comb by centrifugal force—is sometimes adulterated with glucose and offered as a pure article, but the various State food laws are fast getting after such adulteration, and either compelling its true labeling or driving it from the open market. At least since the passage and enforcement of such laws in various States adulterated liquid honey is disappearing from the field of food products.

To sum up, then, any comb honey found upon the market in small wooden frames can be relied upon as being absolutely pure bees' honey. Of course, the flavor may not always be the same, as each nectar-yielding variety of flower produces honey of its own peculiar aroma, just as the pure maple sugar or syrup tastes of the maple and not of the beech or oak.

It may be said, further, that the prospects for a generous crop of honey to be harvested throughout the country the next two or three months seem to be excellent at this time. So, in all probability, there will be plenty of this most healthful sweet for every inhabitant in the land, and each should see to it that he gets his share.

GEORGE W. YORK,
Manager The Honey-Producers' League.

If any of our readers will try to have this published in their local newspapers, we will be pleased to furnish copies of it printed from type-writer type, on one side of the paper, which can simply be handed to the local editor with the request to publish.

If the above brief item could be gotten into several thousand newspapers within the next two or three months, we believe it would help the sale of honey tremendously, and would also go far toward overcoming the evil effect of the manufactured-comb-honey story that has been going the rounds of the newspaper press for so many years.

If any of our readers can use the article that appeared in the Daily News, as published herewith, let us know, and we will be pleased to furnish a type-written copy of it, on receipt of a 2-cent stamp.

Since the foregoing was written, we have received several marked copies of the Philadelphia Press, of which Hon. Chas. Emory Smith is the editor-in-chief. Mr. Wm. A. Selser, a member of The Honey-Producers' League, had an interview with him, and, as a result, Editor Smith published the following as an editorial in the Press for June 24:

Honey and Pure Food

Pure food has its myths as well as every other crusade for reform.

The ingenious story printed as a Sunday special in the supplement of a number of papers by a Newark correspondent, who made a business of furnishing ingenious hoaxes, that honey was made of glucose and forced into combs made of paraffin, has remained for 20 years the bane of the honey industry and the sport of the exchange editor.

The old story is still in circulation, passes through that devious orbit which begins with the syndicate, passes to the Sunday special, finds its way to the patent insert, is repeated by more reputable weeklies, taken up again by some ingenious writer and started again on its syndicate course.

The Honey-Producers' League, formed in Chicago last March, has enlisted itself in the effort to end this myth. For years it appears there has been a standing offer of $1000 for any honey of this character. In the nature of things, neither paraffin combs nor glucose filling can be prepared and sold at the price at which actual honey can be furnished. Liquid honey, separated from the comb, is sometimes adulterated, but any bee-keeper is aware that it is impossible by artificial means to counterfeit the disposition of honey in the comb as made by the ingenious and busy but non-adulterating bee.

Honey was the earliest of sweets. It undoubtedly began the human preference for sweets by its consumption in the days of the Lemur and the later Simian ancestor who succeeded the Lemur in the chain of human development. It produces none of the dietetic disturbances due to either beet or cane sugars. Its production steadily increases in this country. Its consumption grows, and, in time, if The Honey-Producers' League accomplishes all that it proposes, people will undoubtedly understand that no food is so free from adulteration as honey in the comb.

Surely, bee-keepers owe Editor Smith a big vote of thanks for the above utterance. We hope the honey-producing readers of the Philadelphia Press will write and thank him for it. We have already done so as Manager of The Honey-Producers' League.

Let us urge again that all of our readers who have any influence with the editors of their local newspapers, request them to publish the short article on "Comb Honey," which was published in the Chicago Daily News.

Miscellaneous News Items

Mr. J. T. Calvert, of The A. I. Root Co., dropped in to see us last week when on a trip among some of the bee-supply manufacturers of the Northwest.

◆

Southern Bee-Keepers' Association.—This Association is sending out a very neat little booklet containing the program of its second annual convention to be held at Savannah, Ga., July 5, with some beautiful illustrations. Wisely, the program is not so crowded with long papers as to prevent impromptu discussion. Those who can not attend the convention are asked to become members by sending 50 cents to the secretary-treasurer, Judson Heard, of Macon, Ga.

◆

Mr. H. G. Quirin, of Ohio, according to a half-column write-up in the Cincinnati Enquirer, is making a small fortune from producing honey and rearing queens. It figures an annual output of queens at 3000, selling at $1 to $6, or an average of $2 each, or $6000. Then it also estimates $1780 from the sale of honey and bees. We think Mr. Quirin, or any other queen-breeder and honey-producer, would like to see the man (or woman) who gets $7780 annually from the sources mentioned. Truly, if such were the case, there would be a grand rush into the business.

◆

Mr. Jos. Nysewander, of Des Moines, Iowa, is perhaps as large a dealer in bee-keepers' supplies as there is outside of the ranks of the manufacturers who also do a retail business. It was our good fortune to visit him on June 14, coming from the Kretchmer Mfg. Co., of whom we wrote last week in these columns. We walked into the office about 11 a.m., and found both Mr. and Mrs. Nysewander hard at work taking care of the correspondence which was just bordering on a "rush," as the bees of their many customers had begun to bustle on the thousands of acres of white clover bloom that was beginning to yield its nectar so bountifully.

For 22 years Mr. Nysewander has been in the bee-supply business in Des Moines. He's not an old man, either. He's just about the right age to be in his prime. So is his good wife. They certainly make a big team. They unfortunately have no children, so Mrs. N. helps in the office in the busy season. It is a fine sort of partnership. "All in the family," you see. And all the family in it, too.

We would hardly like to tell how much business Mr. Nysewander did last year, but it was quite satisfactory to him. And he must have satisfied a good many customers else the total sales would not have been so large.

Mr. N. owns the building shown on the first page. The lower two floors in width and the basement are used for the bee-supply business, and the upper two floors are divided into four apartments, which are rented to families at a good price. So it is a profitable as well as a convenient building for its owner. Mr. and Mrs. Nysewander reside some distance from their office. They had just sold their nice residence, and expected to move in a month or two. They will perhaps build another one in a better part of the city, although nearly all parts seemed delightful. Mr. Nysewander gave us a carriage ride for several hours, and we were surprised to see so many miles of beautiful residences, and also lawns and parks.

We first met Mr. and Mrs. Nysewander at the Philadelphia convention of the National Bee-Keepers' Association some years ago. It was then that Mr. W. A. Selser gave us that never-to-be-forgotten 30-mile drive along the Wissahickon River. Mr. James McNeill and Mr. and Mrs. Nysewander were also in the two-seated carriage. We had not met them since then until we saw them in Des Moines. They had not changed a bit, unless it be for the better. And the success they have achieved is all deserved. May their tall shadows ne'er grow shorter, nor less in width.

◆

Home Apiary of Stanley Bros.—Arthur and William H. Stanley are old-time bee-keepers in Lee Co., Ill. And neither of them is yet an old man. We called on them when on our way back to Chicago from our Iowa trip, June 15. They own about 300 colonies of bees between them, located in several apiaries besides the home apiary, one of which is in Clark Co., Wis. We believe all are run for comb honey except the Wisconsin apiary, which is devoted to the production of extracted.

Mr. Arthur Stanley is the inventor of the Stanley Queen-Incubator, which is a success in the hands of the queen-breeder.

When we were there the white clover was just beginning to yield, and so the bees were getting busy. Up to that time feeding seemed to be the order of the day, and for many days, as there had been so much cold and rainy weather previous to that time.

Stanley Bros. were right in the midst of strawberry-time. They also furnished various vegetables for the local market, all of which kept all hands very busy. We arrived before breakfast, our train having reached their station, 2½ miles away, at about 5 a.m. It was a hot morning, at least we thought so after walking out to the Stanleys and back to town again in the hot morning sun. And we think we are pretty good on the walk, too.

HOME APIARY OF STANLEY BROS., OF LEE CO., ILL.

◆

Honey-Preferences—A "Stray Straw" in Gleanings reads thus:

"Prof. Cook, after testing pretty much all the honeys, pronounces sage 'pre-eminently superior.' The editor of the Modern Farmer puts Missouri honey at the top, and the editor of the Rural Bee-Keeper calls Wisconsin honey the best, which is only another way of saying that these three men live respectively in the three regions mentioned."

Contributed Special Articles

Advantages of Bottom-Starters in Sections

BY DR. C. C. MILLER

On page 424, our affable Afterthinker refers to my saying sections look better with lock corner down, and says, "Wish you had been a little more explicit as to the *why* of that." Well, Mr. Hasty, I'll try to be explicit, and as you make some strong points against having lock corners at the bottom, which show that it is a somewhat important matter to have them the right way, we may as well talk the whole matter over.

First, as to being more explicit as to the *why* of sections looking better with lock corners down. They look better that way because—because—why, because they look nicer so. The matter of looks is a matter of taste, and I don't know enough to tell *why* a peach tastes better to one man and an apple to another. One thing, however, might be said, and that is that there is more symmetry in the appearance of a section with both visible corners alike. If both upper corners were lock corners, then it would be a question as to whether a lock corner or a plain corner looks better, and upon that question there might be a division of opinion.

I don't dispute the truth of all you say. Been through it all years ago; but much that you say is not true in this locality at the present time. And the things you say would not be true with you *if—you—used—bottom-starters*. I'm not sure that I ever so fully realized the value of bottom-starters as I do since reading what you say.

You say that sections filled with lock corner up "are much less inclined to be pulled apart in handling." That was true with me before I used bottom-starters, because the bees did not build the comb down to the bottom. But it isn't true now. The comb is well built to the bottom, and you would often have to examine closely to tell by the comb which was bottom and which top.

"Both in pile and in case I want a section to stand the other side up from what it did while being built," you say further. Most emphatically that's what I don't want, and what you wouldn't want if both top and bottom of the comb were well fastened to the wood. I want the sections to stand always (unless for a very short time) exactly as the bees had them standing. The honey stays in the cells best that way. Sometimes there's quite a slant to the cells.

"If the honey is all sealed how can it make any difference which side is up?" Yes, but it isn't always sealed, every single cell. Sometimes there will be one or more cells next the wood unsealed; at least in this locality. To be sure, if that honey is thoroughly ripened, as it ought to be, it is not likely to run out of the cell when upside down. But it is a little more sure to stay all right in the cell if left just as the bees placed it. Even the honey that is sealed will stay in the cell without running down against the capping at the lower side, just a *little* better, if left just as the bees placed it.

"Along the top-bar the honey is pretty sure to be plumped out fuller than along the bottom-bar; and finger-bruises would start little leaks else." There's where you have the advantage over me. When you turn a section upside down, you have a place to take hold. I haven't, because the comb is plump full at the bottom as well as at the top. But although yours is safer to handle, it doesn't look nearly so well; and what is of more importance, it doesn't ship so well. (But, say, we don't put finger-bruises in our sections.)

"And when the honey-yield is poor some sections are not attached to the bottom at all, and lots of them only attached an inch or so at one side of the bottom." I know all about that; have had them so they'd almost swing like a pendulum when turned on the side—not fit to ship at all. I don't have that sort of thing now. When the bees attack a section, about the first thing they do is to fasten top and bottom starter together, and at any time during the progress of that section it could be taken out and shipped with perfect safety without the danger of breaking out.

I'll tell you another thing that puzzled me for some time: Like you, I'm addicted to poor seasons; and often when the bees were storing very slowly I've had them fill honey faster on the part of the starter toward the middle of the super than on the outer side of the starter. The result was that the bottom of the starter would swing over toward one side, and then the bees would fasten it to the separator. All at once they ceased doing that sort of work, and I wondered why, till it occurred to me that it couldn't swing over, because I had begun using bottom starters, and as the bees fastened top and bottom together there was no chance for swinging over to one side.

Now don't you come back at me, Mr. Hasty, by saying that you *do* use bottom-starters and have the troubles mentioned in spite of them. In that case, I can only say they work all right "in this locality." McHenry Co., Ill.

⁂

Simple and Safe Way to Get Increase

BY F. GREINER

In practicing the so-called "shook swarm" method, or when following the Heddon plan to prevent afterswarms, the mother colony cuts no figure in the production of comb honey. It is this mother colony which can be utilized advantageously to swell the number of colonies without incurring any risk, providing we can depend upon a fall honey-flow, and we have combs enough at our command to fill the hives. With comb foundation alone we can not increase as fast, although we will succeed in a measure.

On the seventh day after a colony has swarmed, following the Heddon plan referred to, we move the hive to a new location, and after the bees which have marked their location have left it, which will be after a few hours, we proceed to divide the bees and brood-comb, forming two or three nuclei. We observe that each division has a queen-cell or a virgin queen. Queen-cells are plenty at this time, and if we have some cells from choice stock, all the better. It is not very difficult to obtain choice cells if we manage rightly. Almost any good colony will finish up stocked-up cells in an upper story over an excluder at swarming-time or during the honey-flow. It is not the purpose of this article, however, to show how it may be accomplished. So I only say, each nucleus colony must be provided with a ripe cell, and combs added from time to time. A nucleus thus formed seldom fails to get its queen, and it is surprising how quickly the colony builds up when honey is coming in.

A year ago last winter one of my out-yards was almost wiped out of existence, and I did not make much of an effort to populate the empty hives. This season I am increasing on the nucleus plan explained above. A number of young queens have already commenced laying, and I find these nuclei are just the place to dump the many brood-combs obtained by "shaking."

All these early made-up colonies will be brought up in this manner to a state of populousness, not only to enable them to gather their winter stores, but also to give a fair surplus from buckwheat. I am now viewing the many fields being put into buckwheat in the locality around this out-yard with some anticipation. In localities without a fall honey-flow perhaps as good results may be obtained by feeding. But I am not partial to this kind of work, and do not recommend it. Ontario Co., N. Y.

⁂

The Season—Shooting Down High Swarms

BY WM. STOLLEY

Last winter my bees wintered well without any loss, but I have united with others several (rather medium) colonies having very old queens, thus reducing the number of colonies from 42 to 36, all of which are in the very best working condition now.

In January we had 8 zero days, and on 3 days during that month bees had flights.

February brought us, from the 1st to the 15th, 15 zero days, and the temperature dropped as low as 26 degrees below zero during that cold spell. During the remainder of February bees were out more or less on 12 days, and in March the zero mark was not reached again, while bees flew on 21 days in that month.

Our spring was anything but favorable for bees—it was too cold and wet. The valley of the Platte River has been flooded several times, and but yesterday we had another down-pour of 2½ inches, flooding all lowlands once more. Many fields on low land are water-soaked, and farmers are still at it, trying to plant corn—4 weeks late.

White and red clovers are in bloom now, and bees are busy at work on them.

Alfalfa and sweet clover will very soon follow, and with suitable weather conditions a fair honey crop may be expected, where bees are in proper condition.

Generally speaking, winter losses of bees were heavy here. It was not until May 26 that I removed the winter packing in my apiary. Yesterday I had my first swarm of the season, and this reminded me of the severe criticism I suffered at the hands of Mrs. L. Fees (page 38), and our Afterthinker, Mr. Hasty (page 38), upon my applied "shot-gun remedy," as reported by me in the American Bee Journal of 1904, page 838. However, Miss Emma M. Wilson, of "Our Bee-Keeping Sisters," in a very sensible and able way defended me against the slur of the "telescope" sister, and I can well afford to trust that other practical and sensible bee-keepers will judge similarly with Miss Wilson about it.

It is true that a person with a weak vision, cross-eyed, or lacking in good judgment, will most likely make a bungling job of bringing down a swarm of bees (when clustered out of reach) by a well-aimed shot or two, but I hope that my report, and this rejoinder to the comments made upon my veracity, will cause other apiarists, who will have to deal with "high-flyers" this season, to apply the shot-gun remedy, and thus be convinced of the entire practicability of "bringing them down."

I regret that the "inner consciousness" of Mr. Hasty was so seriously aroused as to cause him to say that swarms shot off of trees can not *always* be landed at a spot beforehand ascertained. If Mr. Hasty had read carefully what I say about it in my article, his conscious troubles would have been avoided entirely, because I have *not* claimed that the cluster of bees will *always*, and under all circumstances, fall where the operator desires it to fall; but I said, "*as it happened*," etc., it brought down the cluster of bees *in every instance* right in front of the hive, properly adjusted. *And it did.*

Mr. Hasty's voluntary counsel and advice to adjust the hive *after* the dropping of the swarm is not very good advice, whereas the adjusting of the hive can be done much better, in most cases, before the shooting takes place, for the simple reason that even most gentle bees, after they have struck the ground when shot down, are angered and infuriated to such a degree that it is decidedly unpleasant to fool around them adjusting the hive. If Mr. Hasty will give it a practical trial he is almost sure of being convinced. I have tried it in former years, and have profited by experience.

It is also my opinion that even in cases when bees are clustered too far out of reach for hiving them, and so located that they can not be brought down in front of a properly adjusted hive, several shots of fine shot fired right into the cluster is a very practical way to prevent absconding of the swarm, in a majority of cases.

Should it happen that the queen is killed by the shooting, the bees will, on their own account, return to their old hive, and thus not be lost to the apiarist by absconding.

Hall Co., Nebr., June 10.

Convention Proceedings

Report of the Chicago-Northwestern Bee-Keepers' Convention, held at Chicago, Ill., Nov. 30 and Dec. 1, 1904.

The 14th convention of the Chicago-Northwestern Bee-Keepers' Association was held in Chicago, Nov. 30 and Dec. 1, 1904. The first session was called to order by Pres. George W. York, at 10:30 o'clock a. m., Nov. 30, after which Rev. R. B. McCain offered the following invocation:

"Almighty God our Heavenly Father, we rejoice in the fellowship of thy servants in the world who, whatever their avocations and occupations may be, may come together in fraternal relations and speak to each other of the interests of their lives. We thank Thee for the goodly number that have come here to talk over their daily work; and we pray, Heavenly Father, that Thou wilt give us the Master who walks in the midst of the blooming fields and waving corn, and who speaks the words of eternal truth to those who listen to Him. Wilt Thou give His direction and the guidance of His spirit in all we have to do. We pray Thou wilt bless those left at home, protect them and keep them and watch over the interests of all Thy people. Guide us to Thy praise and glory while we live, and afterwards may we have an eternity to spend in Thy presence with Christ, our blessed Redeemer. Amen."

Pres. York at this point took the opportunity of introducing those present to one another, after which the secretary read the minutes of the preceding convention, which, on motion, were confirmed.

Secretary Moore—A great many years ago there was an honest old gentleman by the name of Jimmie Griffin, when I was very small, and he says, "Francke, blow your own horn or you'll never get a wife." So we have to blow our own horn a little or people won't know we are doing anything. The Executive Committee about three months ago got together and decided they would try to have a big meeting here this fall. We decided to send out two thousand notices of this meeting. We sent it to everybody that would likely, as we thought, come to the Live Stock Show in Chicago in December. Mr. York thought we would get quite a few dollars in. We got $23 in the mail as a result of that, and we are hoping we will get many more dollars at this meeting.

The President appointed Messrs. Fluegge and Jacob as ushers.

Dr. Miller—After hearing the report of the Secretary I feel, as an officer of the National Association, like thanking the officers of this Association for the action they have taken. It didn't occur to me before that a thing of that kind would mean so much to the National as it does; and that sort of thing I think will help to increase the membership of the National. It is an auxiliary to it in increasing its numbers. I believe the action in that respect is worthy of commendation.

Pres. York—There were some who did not get the notice we mailed, and the reason is this: We took the American Bee Journal list, commencing with the State of Wisconsin and stopped when we got to the end of the two thousand notices, which included Wisconsin, Iowa, Illinois and Indiana. There was no intention to slight anybody, but we thought we had better stop when we got to the end of the two thousand.

Sec. Moore—I thought we would get a lot of people in, but I didn't expect to get even $23 in the mail, but I was sure we would have a very big meeting.

Mr. Abbott—I want to call attention to one fact, that because only $23 came in is no argument against the circular. Publicity is the biggest part of advertising. We newspaper men find they are always trying to play that racket on us every time, but a man doesn't throw his money away when he does not get returns. He lets people know he is in the world, and that is the biggest part of advertising.

The treasurer's report was read and approved, after which an intermission of ten minutes was taken to allow those present to pay their annual dues.

THERMOMETER IN THE BEE-CELLAR.

"Where should a thermomenter hang in a bee-cellar?"

Dr. Miller—I should say that it is not an easy matter to decide always where a thermometer should be hung in the cellar. Quite a number of degrees difference will be found in different parts of the cellar. At the top it will be warmer than down at the bottom, so I try to find where I think will be about an average temperature for the cellar, and it does not matter so much where it is as that you keep you thermometer in the same place all the time. If I have it in any one place and decide about what I think the temperature is at which the bees are quietest, then I try to keep it at that temperature. Another thing, you cannot go by absolute degrees, because thermometers vary so much. As I said before, it doesn't matter so much, then, what temperature you have as that you find at what temperature the bees seem most quiet, and then try to hold it at that.

Mr. Dadant—I wish to emphasize what Dr. Miller says as to the temperature at which bees are quietest. The thermometer is always needed to tell you whether, when the bees are not quiet, the temperature is too high or too low. If you find your bees quiet at say 40 degrees and you come back again and find they are not quiet, and the temperature is 42 degrees, you know it is a little too high. If you did not have a thermometer you would not be able to tell whether it was too high or too low. I believe that is the only purpose of the thermometer. If you can get your bees quiet and find out what the temperature is under those conditions, and you keep your bees quiet at that temperature, it does not make any difference where your thermometer is.

Dr. Miller—I am not sure but there is a way of telling. If I understand Mr. Dadant correctly you can't tell by the noise of the bees whether they are too cold or too warm. I wouldn't like to be too critical about it, but I think when they begin to get too cold there is a kind of rattling noise, if I may so call it, of their wings, that you hear, and I don't think I could tell you what the other is, but there is a little difference in the noise, Mr. Dadant, between being too cold and too warm.

Mr. Colburn—In relation to this noise that you speak about, that is the noise bees make in the cellar, I have never had much experience in cellar-wintering—only two winters—and I found my bees making some sort of a noise all the time, and yet they came through last winter very nicely. The question is, how much or how little noise would a greenhorn want to observe in order to know what the temperature should be?

Mr. Stewart—Is there any temperature where bees always keep quiet in the cellar, or do they always keep quiet at any temperature in the cellar?

Dr. Miller—I think there are some who claim they can secure perfect quiet. I never could. I think you will find this: If you have one colony in the cellar and watch it closely you will find part of the time that colony will be perfectly quiet, and then it will have a spell of stirring up and it will be noisy, and then quiet for a long time. If you have a number of colonies in the cellar you will find that there will be a noise there all the time. At least that is the way I find it. At times there will be very little noise; it will suggest to you the blowing of a gentle breeze through the dead trees in winter time. That you will find at all times if your cellar is like mine; and that I think comes from the different colonies, here and there, making an unusual amount of noise. I don't believe there is any one colony that is all the time the same way. I think they have their spells of "turning over in bed," when they make a little more noise than usual. But as to trying to get them so that they are entirely quiet all the time, you might as well give that up. But, find the temperature at which they make the least noise. That is the point.

Mr. Kimmey—Do bees make more noise as they become too cold?

Dr. Miller—Yes.

Mr. Kimmey—Suppose I should find my thermometer at 28 degrees, would you advise me to leave it that way? Do you think it is possible to find it that way?

Dr. Miller—No. I think you might possibly find, the way you have it in your cellar, that they were most quiet at 40 degrees. I might find them most quiet at 47 degrees. That is, your place and my place may be different. But your question?

Mr. Kimmey—My point is, is it possible that the bees would be so cold that they would make less noise than they ought to?

Dr. Miller—No, sir, unless they are dead. When they are dead they make hardly any noise! (Laughter.)

Mr. Kimmey—I don't want that then. I have tried to keep mine between 45 and 50 degrees, and have succeeded very well and have not lost any. I would like to do better than that if I could!

Mr. Abbott—I would like to ask a question, to bring out a point. Dr. Miller says that they will make some noise unless they are so cold that they are dead. I should like to know if Dr. Miller thinks that bees ever get so cold in the cellar or out-of-doors that they die from cold when they have plenty to eat? I don't think they do.

Dr. Miller—There are some things I don't know. One of the things I do know is that Mr. Abbott doesn't think as I do about that. My bees will freeze. I take a bee in my hand and if I hold it out in the cold long enough, that bee is going to freeze.

Mr. Abbott—That is not the question. Don't confine it to a single bee. If two lie together they make heat. You can't make heat with one. If a lot of bees lie together they make heat. Do they ever freeze when they all lie together in that way?

Mr. Dadant—How big a bunch of bees?

Mr. Abbott—The ordinary size?

Dr. Miller—If there is a stove in a room and it is hot enough people are not going to freeze, and as long as there is plenty of food there to keep the furnace going the bees will keep up that heat; they are not going to freeze. When they fail of that they are going to freeze, Mr. Abbott to the contrary notwithstanding. He says they starve. I say they freeze. You can pay your money and take your choice.

Ernest R. Root—I would like to answer both Mr. Abbott's and Dr. Miller's questions. Last summer in queen-rearing operations we conducted a series of experiments to get some drone-layers. We had read in some of the old works that if you freeze a queen for awhile she will become a drone-layer. So I took about a dozen of our young, nice vigorous laying queens, caged them with the bees, put them on a cake of ice in a refrigerator and left them, varying all the way from two hours up to 48. I expected some of them to be dead. The bees were perfectly stiff at the end of two hours. I took them out and examined them and put them back, and some of them we put into nuclei to see what they would do, to see whether the queens would refuse to lay regular worker eggs. I don't know whether you believe me or not—I don't know whether Dr. Miller or Mr. Abbott would; I don't know exactly how they disagree, but we found in every case that when taken off the ice, chilled, cold—I won't say they were frozen to death; they couldn't have been—in a few hours they would "come to;" the queens would begin in three or four days afterwards to lay, and lay normally, and not one of them laid drone-layer eggs. The question was, if bees can be put in a position where they are perfectly stiff with cold for 48 hours, can they be kept in that condition longer, and, if so, how long? I omitted to carry on that experiment. It has been said bees do not die of cold. What kills them we do not know.

Another question, I should say the question of the temperature of the cellar and the buzzing and noise depends somewhat on the time of year. When the bees are first put in they are apt to be quiet in our cellar, with a high or low temperature, but after they have been there for three or four months they begin to get uneasy. Then the latter must be accounted for. If the temperature is too high or too low it must be brought to the proper degree. Giving bees a midwinter flight stops the buzzing and roaring in our case. I would describe this noise, when it is normal, as like a harp. Once in a while you will get a noise something like the sound of telephone wires, not that high note, but a sort of low, distant hum. When you get something of the effect of that contented, quiet noise amongst the bees that seems to indicate everything is normal and right, that is the condition we call perfect; and yet there is a little noise there, and that noise might, to the beginner, seem to be the wrong thing.

Mr. Abbott—We don't get the point exactly yet. I think this is a vital point, and I have been trying to get the bee-books and bee-papers, to say something about it for a long time and they have persisted in not doing it, and that is the reason I am calling it out. I hold that bees are wintered successfully where the mercury runs down to 40 degrees below zero, out-of-doors, on the summer stands; and that that can be done in any place in the United States, provided there is food accessible; and that no normal cluster of bees ever dies from cold when there is food accessible; and to be accessible it must be directly above the cluster; and that the bees in that condition will winter safely any place in any temperature that ever existed in the United States or ever may exist—if the food is accessible—if the "stove" is there, as Dr. Miller says. He brings the point out clearly. If the food is on another frame or where they can't get at it without breaking cluster or following up the line of heat they will die from starvation, but if they can get at the "stove" they will not die. Now if anybody has any evidence to prove to the contrary I should like to know it, for I have been talking this thing for 15 or 20 years, and I don't want to talk it any longer if it is not right. But I do, if it is right, longer and louder.

Mr. Wilcox—What I was going to say was bearing rather upon the discussion between Dr. Miller and Mr. Root, but since Mr. Abbott has spoken I want to say I have conducted one experiment that substantiates his claim very much. I once took a bee-tree about four feet long and set it up in the front yard, full of honey and bees, and with a temperature of 40 degrees below zero. It froze and burst open the whole length; and those bees wintered well and came out right in the spring. I could put my hands right through a crack anywhere in that tree. That goes to confirm somewhat Mr. Abbott's theory. The other matter about which I wish to speak is not very important or profitable, but may perhaps be interesting as an experiment. Before I commenced keeping bees in movable-comb hives I inverted a half sugar barrel filled with bees and honey; poured cold water clear to the brim to drown the bees; left it 24 hours with a temperature of 25 or 30 degrees below zero; then went to carry my bees in and get my honey. I was surprised on moving it into the house to find that the water was not entirely frozen over at that very cold temperature and 24 hours out-doors, but I rolled it up under the stove just the same and melted the ice out and went away from home. In a few hours more the bees drove my wife out. They were all alive and happy as ever. The query is, Why didn't they drown? Every bee was under water; they were completely covered. Then, again, why didn't that water cool off and freeze over? I suppose perhaps the warmth of the bees prevented that, but I would have expected them to drown if they breathed. Can they live that long without breathing?

Mr. Becker—As to the question, do bees freeze outdoors, I want to say this, that I have had bees that were outdoors all winter with broken hives that you could almost run your fist into, and they appeared to have wintered all right. Last winter when the thermometer went down to 25 degrees below zero in our latitude, I had 10 colonies in new hives, with plenty of honey, and every one of them died, with the exception of one, before spring came. It lived until spring and then dwindled away and finally died, and in the hive there was as much as 50 pounds of honey. The other hives, many of them full of holes, stood on the summer stands. I couldn't take care of them in the fall because I was too busy. I put in a piece of gunnysack to fill up the opening and they wintered through in good shape, and produced virtually the honey I got this year. I believe it is not so much the cold as it is the condition that the bees go to winter quarters in. I don't believe in outdoor wintering. I don't want to risk it if I can possibly help it. I believe what will do one year won't do another year. The conditions as to bees are different one year from another in one locality; and they may be all right in one locality and not in another. I also believe that if we can keep our bees dry, or from getting too much moisture around the cluster, that the cold will not affect them so much as the dampness does. The honey will freeze around when there is much honey in the comb, and there will be great chunks of ice hanging around the bees all over the comb, and that is one effect of out-door wintering. When it is not warm enough so that they can come out and clean themselves they will begin to get damp, and the dampness will get through all the hives, and then the next little cold spell will catch every one of them and they die. Where we winter bees in the cellar, we aim to keep them dry and avoid the extreme cold. I believe that dampness has more to do with it than cold weather.

Dr. Miller—I don't believe that this is a matter of vital importance and I hope we will not take up time with it, but if you are going on with it I want to say what I think about it is, a single bee will freeze—I think no one disputes that; two bees put together will freeze if it is cold enough and the cold continued long enough; so will three or four; and there comes a point somewhere where Mr. Abbott will tell you they don't freeze, they starve. If you have a small cluster that small cluster will freeze, and before we get to the place where Mr. Abbott says they starve, they still will die, whether it is from freezing or from starvation, or whatever it may be. But here is the point. You put them down to 40 degrees below zero, or put them down to the point where they do not stir, and I think you will get a point, and I don't believe the bees will move at that even if there is honey above them. They will wait until it gets a little bit warmer before they will break cluster to get anything fresh. If you hold them there long enough, and if the cold is severe enough, they are going to stay there and they will freeze, and freeze to death. That is what I think. Now Mr. Abbott thinks they starve. Stop that cold at any time and let them warm up and start in afresh. But I say, put it down cold enough and hold it there and those bees are going to freeze. You don't call it starvation with a single bee, why should you call it that with the colony? I don't believe it makes a particle of difference which way you believe.

Mr. Abbott—They don't get 40 degrees below zero in the cluster.

Mr. Stuebing—I am an old bee-keeper—about 50 years in the business. When bees are given honey they will never freeze outdoors.

Mr. Root—I don't know whether I agree with Dr. Miller or Mr. Abbott. I am going to tell you something, and Mr. Abbott can clap his hands to show us whether it hits his way or not. We wintered bees for a good many years at Medina outdoors. We winter a good portion indoors now. I noticed that the bees that were dead on the comb would be circled around as near a sphere as they could be; that on each comb they would be in the form of a circle. If they were dead there would be about two inches without any honey around them at all. I never saw any bees that were dead that had access to honey, no matter how cold it was, but every time I found a cluster of bees dead I found they had eaten away all the honey around them to the extent of three or four inches. Seemingly they had got to the point where they couldn't move; whether they froze or starved Dr. Miller can settle.

(Continued next week.)

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Uniting Dwindled Colonies in Spring

No doubt some of the sisters will feel grateful to Bro. Latham, page 438, for arguing there is no necessity for ending the life of a colony, even if it has dwindled down to almost nothing. When one has only 3 colonies, it seems a serious matter to reduce the number to 2; and even when one has 100 colonies it goes against the grain to reduce the number to 99. One can not divest oneself entirely of sentiment, even in this dollar-and-cent age, and the sick chicken is likely to be nursed carefully up to the day of its death, even if one is sure that it has no chance for recovery. And colony No. 3 can not be remorselessly swept out of existence without leaving an aching void. So there will be those who will be glad to take Bro. Latham's plan of keeping the family circle of 3 colonies unbroken, even if it does cost more than it would to buy another full colony. What mother could be satisfied to give up the care of a sick child by being told that another child could be bought to take its place for less money than it would take to doctor the sick one?

But if it is merely a matter of dollars and cents, it must be admitted, albeit with a sigh, that tinkering up a weakling in early spring, especially if queenless, costs more than it comes to, and it is hard to understand how it can be more profitable for one with only 2 colonies than for one with 200.

◆

Bees Troubled with Moths—Queenlessness—Transferring

Dear Miss Wilson:—Will you please tell me how I can rid a hive of bees of the wax-moth. I notice the bees are at work most of the time carrying out stuff that looks like fine sawdust. I have killed quite a number of the moths on the outside of the hive. The colony of bees is hybrids, and not a very large one.

1. How does a colony appear if it has no queen?

2. If I should transfer them to a new hive with one-inch foundation starters in the frames, and starters in sections, would they stay there all right and go to work?

3. The hive they are now in is an old one—a chaff hive. Do you think I could lift out the frames and clean them, and get rid of the moths that way?

4. If I should transfer them to a new hive, and there was any young brood sealed, or just coming out, what could be done with them?

I bought the colony this spring, and the man that I bought them of said they were all right, and I took his word for it. I think he does not know how to keep bees clean, or he would keep them in better shape. The bees have not swarmed yet.

I hope this is not too long for you, but I am very anxious about my bees, for I love them, and they have not offered to sting me. I think I will get along all right with them.

Mrs. New Hampshire.

1. Bees that have been queenless some little time will carry in a noticeably less quantity of pollen than those that have a laying queen and are rearing much brood. But the best way is to lift out the frames and examine their contents. If a laying queen is present there will be eggs found in the cells, and if she has been present long enough there will be brood in all stages. There may, however, be a virgin queen in the hive, and in that case there will, of course, be no eggs or brood from her. On the other hand, there may be eggs and brood and no queen. That would be a case of laying workers. The laying of these pests is not as regular as that of queens. If drone-cells are present they will be used in preference to worker-cells, and two or more eggs may be found in each drone-cell. Often one of the first signs of laying workers is the finding of eggs in queen-cells, and if you find more than one egg in a cell you may find a dozen eggs in a single queen-cell..

One way to help decide whether any queen is present, either laying or virgin, is to give a frame of eggs and brood from another colony, always supposing you have another, and if queen-cells are started it is tolerably certain that no queen of any kind is present.

2. Yes, but it may be well to say that it is poor economy to put inch starters of foundation in brood-frames. You will be pretty

sure to have a good deal more drone-comb built than you will like, and the loss from rearing and feeding a big crop of drones will more than counterbalance all you will save on the foundation.

3. Yes, you can help in that way, but it is the bees themselves that must be depended upon to keep out the moths. Don't lay the blame on the old hive. A weak colony, especially if the bees are of black blood, will allow the moths to get the start of them in a new as as well as an old hive; and a strong, active colony of black bees, or even a weak colony of vigorous Italian blood will not suffer the presence of moths.

Lift out the frames one after another, shake or brush off the bees, and look for the silken galleries of the worms. They will be found more especially in the cappings of the sealed brood. Take a big pin, wire nail, or something of the kind, and tear open the gallery at one end. Then begin at the other end, tearing it open as you go, and you will thus drive along Mr. Worm till he comes out at the hole you first made. Then when he is at your mercy you can end his existence in any way that suits your fancy.

4. The combs containing the brood can be cut out and fastened into the new frames in the regular way of transferring, filling the frame with combs and tying strings about it till the bees fasten it in. Perhaps an easier way will be to leave in the old hive all the frames with just enough bees to keep the brood from chilling, and then when all the brood is hatched out, which will be in 3 weeks from the time of transferring, drive or shake out all the rest of the bees. But it may be that your bees will do all right in the old hive.

Don't send any postage stamps when you write to this department, and write just as long letters as you like.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to Dr. C. C. Miller, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Uniting Bees—Some Difficulties

Why does a colony sometimes unite peaceably with a strange swarm, and at other times fight it off until apparently not a bee is left?

The case is this: Last Saturday I put out a few boxes with strips of foundation fastened to the top. On Wednesday I found a swarm of black bees in one of them, so I brought it home after dark and placed it at the side of the *Italian* colony with which I expected to unite it. I left them there until Thursday at about 6 p.m., when both were smoked some. The box was then turned upside down, the bottom removed, and the bees shaken on a board in front of the old colony. The black queen was found and disposed of. The black bees rushed in, and those that were slow about it were helped along with smoke.

They were at once attacked by the Italians inside the hive and on the alighting-board. I smoked them through the entrance, which seemingly stopped the fight, but only for a very short time. I smoked them again, this time sufficiently to take all fight out of them—so I thought. Results: Truce until the smoke had passed away, then wholesale exhibition of Jiu-Jitsu.

After dark I brushed all dead and dying bees from the alighting-board, and this morning I found not only the alighting-board covered with dead bees, but also the entrance (⅜x14¼) blocked so that hardly a bee could pass in or out, and they were under the framea as far in as I could well remove them with a stick.

Now I am quite sure that had I hived the swarm on regular size frames, hunted the queen out, and then placed the hive over the other, or the frames between the frames of brood in the Italian colony, they would have united peaceably. But last year I captured 12 strange swarms, and every time united them with other colonies that I had at home, and in the same way, not even hunting up the queen in every case, and of the 12 just one acted as the one did to-day. That one, however, was as bad as, if not worse than, this; for the day after I united them the colony was seemingly weaker than before, and the ground was just covered with dead bees.

While I do not intend to unite 2 colonies in this way again, yet I would like to have your opinion of the cause and the prevention of the trouble.

At present the bees are gathering well from white clover. Iowa.

Answer.—It is difficult to say why bees unite at one time peaceably and at another time fight when conditions seem just the same. I don't know just what was the trouble in the case you mention, but it is just possible that the black swarm was an afterswarm, having a virgin queen. If the weather was bad, and the bees were not gathering, that would make trouble about uniting. You would have had less trouble if you had killed the black queen 2 or 3 days before uniting. Also if you had united in a somewhat piecemeal manner. Bees seem to welcome the accession of a small number when they resent the entrance of a whole family. In hundreds of cases I have given to a colony a single frame of brood or honey with adhering bees, and never knew any fighting.

Swarming

1. Will bees swarm before building any queen-cells? If so, are they likely to do so?

2 It is impractical for me to stay at home and watch for swarms, so I must resort to artificial swarming or dividing—probably the brush-swarm plan. At what stage of the erection of queen-cells should the swarm be shaken, when queen-cells are started without brood in them yet—after brood can be seen in them, or after they are capped over?

3. In removing the old hive to a new location, and putting a new hive on the old stand, is it essential that the old queen should remain or be shaken into the new hive on the old stand? or can she be put into the old hive on the new location?

4. Do afterswarms come out only when the old hive remains on the old stand?

5. Do they always fail to come out when the old hive is put in the new location?

6. If no afterswarm comes out when the old hive is changed to the new location, is there any need of cutting out queen-cells? Wisconsin.

Answers.—1. Bees do not generally swarm until a number of queen-cells are started and the most advanced ones are sealed. Sometimes they do not wait till cells are so far advanced, and in rare instances they have been known to swarm without having even eggs in queen-cells. This refers to prime swarms. Afterswarms have sealed cells with quahking queens in them ready to emerge as soon as the swarm has issued.

2. Swarms may be shaken without paying any attention to queen-cells as soon as the season of swarming comes, or as soon as colonies are sufficiently strong. Some prefer to wait until a number of cells are found containing eggs or larvæ. It would hardly do to wait till sealed cells are present, for at that time a swarm is likely to issue. The presence of queen-cell cups with neither egg nor larva in them need not be considered, for these may be found at any time, even in winter.

3. The queen is to remain on the old stand with the shaken swarm. The point is that the brood is to be taken away.

4 and 5. Afterswarms are likely to issue if the old hive is left on the old stand, and are less likely if the old hive at the time of swarming is removed to a new place; but may occur then. If the swarm is put on the old stand, the old hive close beside it, and then a week later the old hive removed to a new place, you may count quite safely on no afterswarm.

6. According to what has just been said, it will be seen that removal of the old hive to a new location will not prevent the necessity of cutting out cells, unless such removal occur some days after swarming.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

NATIONAL ASSOCIATION HONEY-LABEL.

If a sore spot has anything of the pathetic quality about it, surely we may say that the spot that's *going to be sore* is still more pathetic. Our Editor touches a spot that's going to be sore, on page 355—that prospective honey-label of the National Association. A label of this sort says to the public, "We produce better honey than do the common herd of our craft, because, you see, we are the progressive men." Is this going to be true? I am almost for conceding that our progressives exercise themselves to get *more* honey, to harvest honey easier, to have things *look* nicer, to test and adopt novelties, to have some specially desirable kind of bee—anything and everything except quality of product, secured in the only reliable way—ripeness.

Ripeness involves time (among other things), and our typical progressive is scandalized by the expenditure of that one thing. His words are, "Hurry!" "Push things!" Honey just barely ripe enough to keep without fermenting and changing flavor, is the mark many set before themselves to strive for. The true mark should be a great deal higher than that. I even fear that the gentleman exists who wants to lean on a label—and thereby sell honey more unripe than before. Also, a practical minimum of ripeness for Association enforcement is going to be very hard to set. Capped honey is not always ripe; and uncapped honey is not quite always unripe. Honey may be very ripe and yet not taste very good. And, t'otherwise, honey may (if right from the comb) be delicious to the taste and yet be very unripe—totally unfit for keeping. Yet if there is not some sort of enforcement from the start the label will become a stone around the neck instead of a benefit—like the name of an immensely advertised ginger snap that might be named—all will soon expect it to be below average quality instead of above, and persist in that expectation.

AUGER-HOLE ABOVE USUAL ENTRANCE.

Somehow I don't believe bees prefer an auger-hole entrance to the usual form. I'll admit that it often looks that way. Many hives have an ordinary entrance at the bottom and an auger-hole 2 or 3 inches above. We see the latter popular and the former unpopular—and jump to wrong conclusions. The auger-hole is the nearest road to where the bees want to go. Also every inch away from the ground (up to a certain limit—10 feet or so) adds a little to the desirability of an alighting-place, from the bee's point of

You and Your Bees

—WILL LIKE—

"THE ELGIN HIVE"

A proven success Not an experiment

"The Elgin" is comprised of fewer pieces than any other knocked-down hive. No nailing required to put it together. Any man, woman or child can assemble The Elgin in a few minutes. Saves labor, trouble and racked nerves. No pattern, diagram or book of instructions needed in order to set it up.

Simplicity of construction is such that mistakes are impossible. Standard size brood frames, supers and other accessories perfectly fit "The Elgin."

Material and workmanship unexcelled. Patent corners of metal make it air and water tight, and prevent warping. Made in 8 and 10 frame sizes. Special sizes if desired.

Let us figure on your **Bee-Supplies—Hives, Sections, Frames, Foundation, etc. GOOD GOODS. SATISFACTORY PRICES.**

Send to-day for illustrated circular and prices of "The Elgin." It will pay you.

The National Supply Co.

E. End Kimball St. Bridge, ELGIN, ILL.

27A3t Please mention the Bee Journal.

Do You Need Queens? By Return Mail?

If so, we can fill your order with the best Queens that money can buy. Try our strain of 3-band Italians; they will not disappoint you with empty supers. Untested Queens, 75 cents; $8 per doz. Tested Queens, $1 each. Send for circular. **J. W. K. SHAW & CO.**

13Atf LOREAUVILLE, Iberia Par., LA.

Please mention Bee Journal when writing.

Wanted The names and addresses of those in the U. S. who expect to buy honey in car or less than car lots during 1905.

The St. Croix Valley Honey-Producers' Ass'n,

26A3t GLENWOOD WIS.

What Adel Bees Do

E. MILTON, MASS., May 27, 1905.

Send me queen same strain as the one sent 1904. That queen proved the best queen I ever received. Her bees filled a super before May 15, 1905.

ROBT. FORBES.

All Tested Queens are $1 each.

HENRY ALLEY, Wenham, Mass.

Please mention Bee Journal when writing.

We Sell Root's Goods in Michigan

Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.

M. H. HUNT & SON,

BELL BRANCH, WAYNE CO., MICH

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The **Standard-Bred** kind, reared by some of the best queen-breeders in America, and warranted purely mated. Sent **by return mail** at these prices:

One Untested Queen for 75 cents; 3 for $2.10; or 6 for $4.00.

An Untested Italian Queen-Bee FREE as a Premium

For Sending One New Subscriber

As has been our custom heretofore we offer to mail a fine Standard-Bred Untested Italian Queen to the person who complies with the following conditions, all of which must be strictly followed:

1. The sender of a new subscriber must have his or her own subscription **paid in advance** at least to the end of this year.

2. Sending your own name with $1.00 for the Bee Journal will not entitle **you** to a Queen as a premium. The sender must be already a paid-in-advance subscriber as above, and the new subscriber must be a **NEW** subscriber; which means, further, that the new subscriber has never had the Bee Journal regularly, or at least not for a whole year previous to his name being sent in as a new one; and, also, the new subscriber must not be a member of the same family where the Bee Journal is already being taken.

We think we have made the foregoing sufficiently plain so that no error need be made. Our Premium Queens are too valuable to throw away—they must be **earned** in a legitimate way. They are worth working for.

If you can not get a new subscriber, and want one or more of these Queens, we will send the American Bee Journal a year and a Queen—both for only $1.50.

Address all orders to

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334 Dearborn Street, CHICAGO, ILL.

G. B. Lewis Co's Goods at Factory Prices

We carry a most complete line of **BEE-KEEPERS' SUPPLIES.** Send for catalog. It's free. Foundation Cutter free with each order, if you state where you saw this ad.

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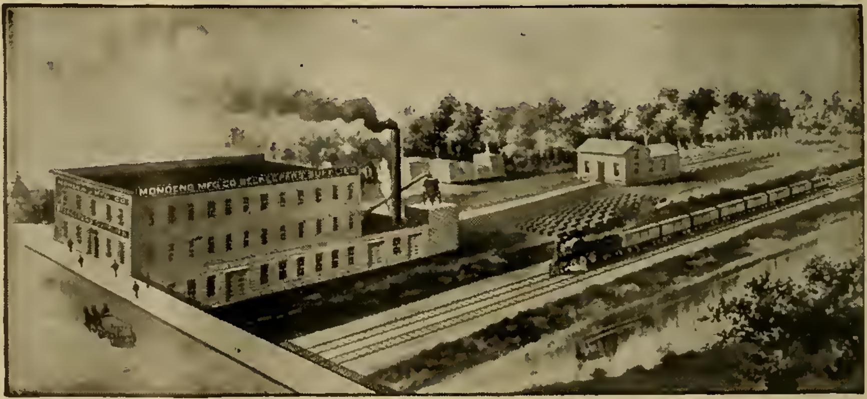
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147 and 149 Cedar Lake Road, MINNEAPOLIS, MINN.

view. At a small round hole the professional guards have less chance to get in their monkeying with each incoming bee. So far as that may cause popularity it would be a genuine popularity. Page 356.

NEW VS. OLD COMB FOUNDATION.

As to new foundation being better than old, a majority of the experts (15 out of 29) say it is not. Three more join the same rank with an "if"—if you'll steam it, or temper it, or dip it in warm water. Then 9 more, inclining more or less to think there is *some* difference, think the difference is quite small. That leaves only 2 unaccounted for, neither of whom thinks the difference large. Seldom we get so near absolute unanimity. Page 356.

HONEY VS. SOAP FOR WASHING.

I haven't gotten around yet to the experiment of washing a pair of big, rough, dirty, masculine hands in honey used instead of soap. Of course we are interested to see that a competent judge finds it to work tolerably with feminine hands. Lack of *penetrative* power is the off-hand suspicion one would feel toward honey for this purpose; may be we suspect wrongly. The soap we quite commonly meet imparts a bad smell, and honey wouldn't do that. Also, soap often carries in itself a fearful nastiness, only partly eliminated by strong alkali; and honey is innocent on that score. Say, Sister Wilson, try a batch of handkerchiefs and napkins, and similar small hardware, with honey and not a particle of soap. Using as little water as practicable, soak over night and wash out in hot water. May be there's something to be found out yet, who knows? 'Spects nothing but decidedly white honey should be used on delicate goods, lest it stain them. Page 360.

VIRGINIA QUEENS Italian Queens secured by a cross, and years of careful selection from red-clover queens and superior stock obtained from W. Z Hutchinson. Untested queens, 75c; after June 15, 60c; tested queens, $1.00; after June 15, 75c; selected tested queens, $1 25; after June 15, $1.00. Write postal card for circular. **CHAS. KOEPPEN.**
17A26t FREDERICKSBURG, VA.

QUEENS

We have secured the services of one of the best Queen specialists in the U. S. Over 20 years' experience rearing Queens. Our Yard is stocked with select breeders from the best yards in America, and can send Queens by return mail.

Prices to Sept. 1, 1905:

Untested Queens	$ .75
Select Untested Queens	1.00
Tested Queens	1.50
Select Tested Queens	2.50

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TOLEDO, - OHIO.

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Fine Italian Queens

Untested, after June 15, 75c; Tested, $1.00; Breeders—the very best, $5.00. Terms cash with order. Safe arrival and satisfaction guaranteed. **WALTER S. ROSS.**
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We carry a large stock and greatest variety of everything needed in the Apiary, assuring best goods at lowest prices, and prompt shipments. We want every bee-keeper to have our **Free Illustrated Catalog**, and read description of Alternating Hives, Massie Hives, etc. **Write at once for Catalog**, either English or German language.

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Full line of SUPPLIES, wholesale and retail.

Working Wax into Foundation for Cash a Specialty.
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Are Perfect in Workmanship and Material.

By sending in your order NOW, you will SAVE MONEY, and secure prompt shipment.

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Texas.—The Texas State Bee-Keepers' Association will hold its next meeting at College Station, with the Farmers' Congress, July 25, 26 and 27, 1905. These annual meetings are usually largely attended and are pleasant and profitable occasions. Visiting bee-keepers from other States are cordially invited to be present with us W. H. LAWS, Pres.
LOUIS H. SCHOLL, Sec.-Treas.

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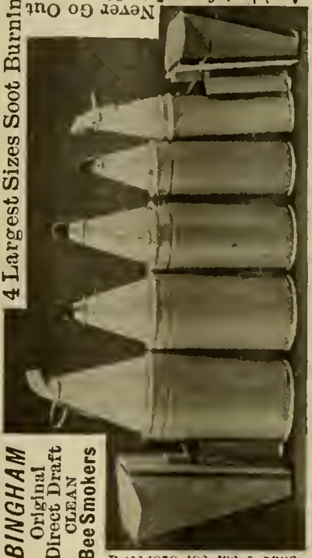

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$1.50. $1.10. $1.00. 90c. 65c.—per mail.
Sent on receipt of price per mail.
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OTISVILLE, PA., Jan. 18, 1904.

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By Return Mail. From my 3 and 5 banded long-tongued Italians. Tested, $1; warranted tested, 75c; untested, 60c; no disease. I guarantee all Queens perfect, to arrive safely, and to give reasonable satisfaction. I have pleased others and can please you. May I ask for a trial order?

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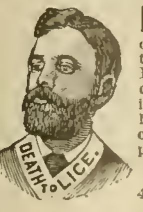
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LOSS BY LICE

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Queens From best honey-gathering stock, 60c. Tested Queens, $1.00.

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Owing to the great demand for my TENNESSEE QUEENS for several seasons, and the quantity of standing orders from old customers, I decided not to advertise until my books were cleared of orders, and thus avoid disappointing customers.

I am now ready to fill orders by **RETURN MAIL.** Breeders used: Imported dark leather-colored Italian; my selections from light imported Italian; Moore's long-tongue; golden; Carniolan (mated to Carniolan drones in distant yard, and to Italian drones); imported Caucasian (lately received, mated for the present to Carniolan and Italian drones (after Aug. 1 to Caucasian drones).

Prices until Oct. 1.		After Oct. 1.		Tested—	
Untested 12 for	$6.00	Untested 12 for	$7.50	Each	$1.50
" 6 for	3.25	" 6 for	4 00	Breeders—	
" 1 for	.60	" 1 for	.75	Each	3 00

27A13t **JOHN M. DAVIS, Spring Hill, Tenn.**

87½ Percent Saved

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Security Mutual Life Insurance Company

EACH POLICY HOLDER is entitled to a Bond issued by the National Total Abstinence League.

YOU may hold a policy and BOND.

General and special agents wanted. Address,

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The quality of our work is pretty well established. Those who have bought of us know what the goods are. They also know that they can buy for less money from us. If you have never bought anything from us the best time to do so is now when you want **Shipping-Cases.** We save you money and give you goods of quality. Let us know to-day the quantity you need and we will mail you prices. The Cases are made in any size up to 18 inches, with one-piece covers. Be sure to mention the width desired.

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EITHER GOLDEN OR HONEY QUEENS AFTER JULY 1.

Our Goldens will come up with any other Golden strain. Our **Honey-Queens** are what some breeders call "Red Clover Queens."

	1	6	12
Untested	$ .75	$ 4.00	$ 7.00
Tested (or War. Tested)	1.25	7 00	13 00
Breeders	5.00		
2-frame Nuclei (no Queen)	2.00	11.00	22 00

When Queens are wanted with Nuclei add price of any Queen wanted. We guarantee safe arrival of all Queens and Nuclei. Our breeders may be returned after 30 days, if satisfaction is not given. Cash must come with all orders. Orders are booked and filled in rotation.

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16Etf **Please mention the Bee Journal.**

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Order your supply now. Pack your honey in cases before storing away; this keeps them in a bright, clean condition. We invite your inquiries. We can ship promptly.

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ADRIAN GETAZ,
44Atf KNOXVILLE, TENN.

☞ J.G. Goodner, of this State, writes me that he "prefers to pay $25 for a Rietsche Press than do without it."—A. G.

For Queens

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He will furnish at same prices as last year: Tested, $1; Untested. 75c; 5 for $3.25; 10 for $6; 15 for $8.25; 25 for $12.50; 100 for $45. He breeds Goldens, Carniolans and 3-Band Italians. Also 1, 2, and 3 frame Nuclei, and full colonies. Prices given on application. Pharr pays the freight, and guarantees satisfaction on all Queens. To do justice and judgment is more acceptable with the Lord than sacrifice. —(Prov. 3: 21.) 6Atf

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Choice home-bred and imported stock. All queens reared in full colonies.

One untested queen.....	$ .65
One tested queen.........	.90
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All grades ready to send by return mail.

Safe arrival guaranteed. For prices on quantities and description of each grade of Queens, send for free price-list. 100 or 200 lbs. of Brood Foundation. Send for sample and prices.

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Golden Italians Have no superior, and few equals. Untested, 75c; 6 for $4.00.

Red Clover Queens Which left all records behind in honey-gathering. Untested, 75c; 6 for $4.

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C. H. W. WEBER CINCINNATI ...OHIO...
Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

Honey and Beeswax

CHICAGO, June 19.—The little that sells consists chiefly of extracted and the market is a small one. Comb ranges from 12@12½c for the best white with off grades 1@3c less. Extracted, white, 5½@7c; amber, 5@6c. Beeswax, ready sale at 30c.
R. A. BURNETT & CO.

CINCINNATI, June 2.—There is only a fair demand for honey at the present time. We quote amber extracted honey in barrels at 4¾@6c. according to quality. White clover extracted at 6½@8c. The comb honey market is practically closed for the summer. Beeswax, 29c.
THE FRED W. MUTH CO.

BOSTON, May 23.—Our honey market continues very dull, with very little movement to be noted. We quote fancy white at 14c; No. 1, 12½@13c. Extracted, from 6@8c, according to quality.
BLAKE, SCOTT & LEE.

PHILADELPHIA, June 21.—As the season advances, there is very little call for comb honey. In fact, no sales, and we make no quotations. Commission men are accepting any offer they can get for what little stock they have on hand. Extracted honey is in some demand. Possibilities of a big crop are holding prospective buyers back. We quote: Fancy white, 7@7½c; amber, 6@7c; dark, 5½@6c. Beeswax in good demand, 29@30c.

We are producers of honey and do not handle on commission.
WM. A. SELSER.

ALBANY, N.Y., June 17.—The honey market here is very dull now. It is between seasons. Receipts and demand very light. Very little old crop carried over, and will be in good shape for new crop, which begins in August Quotations are nominal now. White comb, 12@14c; mixed. 10@12c; dark, 10@11c. Extracted, white, 6@6½c; mixed, 5½@6c; dark, 6@6½c. Beeswax, 28@30c.
H. R. WRIGHT.

KANSAS CITY, June 21.—There is very little comb or extracted honey on the market at present, but what there is is being quoted as follows: Fancy white comb, 24 section cases, $2 25 to $2.50; No. 1 white and amber, $1.75 to $2,00. Extracted, per pound, 4½@6c. Beeswax, 25@28c.
C. C. CLEMONS & CO.

NEW YORK, June 19.—The comb honey market is very quiet and we are hardly justified in making quotations, Some few lots are sold here and there at 13c for fancy, and 10@12c for lower grades, but no large blocks could be moved at these figures. There is still considerable of last year's crop unsold, part of which, no doubt, will have to be carried over until the fall. Extracted honey in fairly good demand. New crop California honey selling at 6½@7c for water-white, 6@6½c for white, and 5@5½c for light amber. Southern at 50@60c per gallon according to quality. Beeswax somewhat declining; choice average stock selling at 29c.
HILDRETH & SEGELKEN

CINCINNATI, O., June 9.—There is no demand for comb honey on account of the warm weather. Extracted is in usual demand for this season of the year. We quote white clover at 7@8c; amber, in barrels, at 5¼@5½c; in cans, 5¾@6c. Beeswax, 28c.
C. H. W. WEBER.

DENVER, June 26.—The demand for both comb and extracted honey is light at present, and there is enough of old stock on hand yet to last until the new crop comes in; the same is selling as follows: No. 1 white comb, per case of 24 sections, $2@$2.20; No. 2, $1.75@$2. White extracted, 6½@7½c per pound. Beeswax, 26c.
THE COLO. HONEY-PRODUCERS' ASSN.

SAN FRANCISCO, June 28.—White comb, 1-lb-sections, 11@—cents; amber, 8@10c. Extracted, white, 5½@—cents; light amber, 4@4½c; amber, 3@3½c; dark amber, 2½@—c. Beeswax, good to choice, light, 27@29c; dark, 25@26c.

Market is quiet and presents in the main an easy tone, especially for other than choice to select water-white. In a limited way on local account the latter sort is salable to fair advantage. Common amber grades are not readily placed, even at low figures, either for shipment or on local account.

CROP 1905

We have a party wanting the first car of new comb honey. It would probably pay those having such goods to write us.

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ROME, PA., Route 16, May 22, 1905.
G. B. LEWIS CO., Watertown, Wis.
Gentlemen:—I think the sections the best I ever saw.
Yours truly, W. J. HILL.

SMITHVILLE, GA., May 9, 1905.
G. B. LEWIS CO., Watertown, Wis.
Gentlemen:—Am anxious to use your sections, for I consider them the best made. Yours truly, R. P. JOHNSON.

DEERFIELD, IOWA.
G. B. LEWIS CO., Watertown, Wis.
Gentlemen:—I want to say that I consider your make of sections the nearest perfect of any I have ever had. I have folded packages of 500 without breaking one, and I can not say that of others I have used.
Yours truly, GEORGE BROWN.

GRAND VIEW, IOWA, June 3, 1904.
G. B. LEWIS CO., Watertown, Wis.
Gentlemen:—I received those sections in good shape, and am well pleased with the same. They are all right in every way. I shall recommend your bee-supplies to other bee-keepers. I think you make better goods than any other firm in the world. Accept my thanks.
Yours truly, GEORGE B. MCDANIELS.

KENTON, OHIO, May 4, 1904.
G. B. LEWIS CO., Watertown, Wis.
Gentlemen:—The goods are simply fine in every respect. We have compared a few of the No. 1 sections bought of another firm which we carried over from last season with your No. 2, and find that the No. 2 are superior. Yours truly, NORRIS & ANSPACH.

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American Bee Journal

45th Year CHICAGO, ILL., JULY 20, 1905 No. 29

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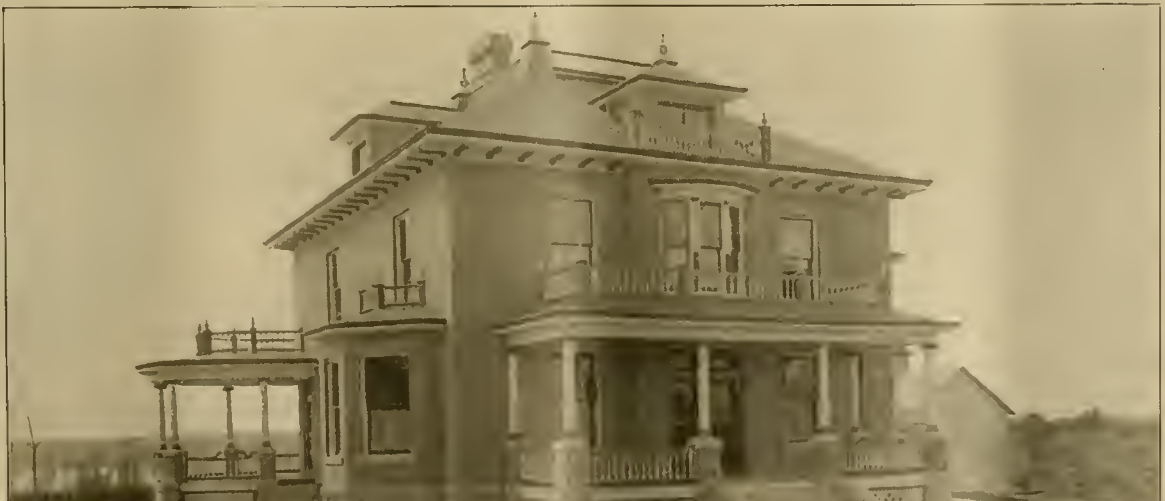

New Home of Mr. C. P. Dadant, with Mississippi River Shown in the Rear at the Left.
(See page 502)

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY

334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

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Objects of the Association

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2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

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(INCORPORATED)

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For a limited time we offer No.25 Honey-Jars, porcelain cover, metal screw cap, holding one pound of honey net, one gross in case complete in 5-gross lots, $4.00 per gross; less quantities, $4.50 per gross, f.o.b. New York. If you want to secure some, let us know at once.

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Untested Queen	$ .75	Select Breeding Queen	$5.00
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Untested	$0.75	$4.00	$7.50
Select Untested	1.00	5.00	9.00
Tested	1.50	8.00	15.00
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GUILLERMO ARNOLD, box 44, Cardenas, Cuba

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17A26t FREDERICKSBURG, VA.

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FINE QUEENS

By Return Mail. From my 3 and 5 banded long-tongued Italians. Tested, $1; warranted tested, 75c; untested, 60c; no disease. I guarantee all Queens perfect, to arrive safely, and to give reasonable satisfaction. I have pleased others and can please you. May I ask for a trial order?

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◆

We have secured the services of one of the best Queen specialists in the U. S. Over 20 years' experience rearing Queens. Our Yard is stocked with select breeders from the best yards in America, and can send Queens by return mail.

◆

Prices to Sept. 1, 1905:

Untested Queens	$ .75
Select Untested Queens	1.00
Tested Queens	1.50
Select Tested Queens	2.50

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521 Monroe Street,
TOLEDO, - OHIO.

IN SEASON

Sections

We have a larger stock of sections than we ever had at this season, and are prepared to make prompt shipment of sections, foundation, and most other goods. There has been very little delay in orders all season except in a few cases where something special has held some orders longer than usual. Our agents generally are also in a position to make prompt shipment. If the bees get lots of honey, and you need more goods quickly, remember we are in a position to furnish them by first train.

◆

"I desire to thank you for being so prompt in sending the sections I ordered from you. They came in less time than it takes to tell it." L. G. Reed.

Kent, Ohio, July 10, '05.

◆

Special Price on Tin Cans

We recently secured a special bargain in half-gallon square cans. They are choice bright stock; but as the pattern differed slightly from the regular one they are now making, they closed them out at a special price. We have also an overstock of quart oblong square cans. While this stock lasts we will make the following prices for shipment from Medina only:

¼-gal. oblong square cans with 1½-inch screw, $5.00 per 100; $45 00 per 1000.
½-gal. square cans with 1-inch screws, $6 00 per 100.
½-gal. " " 1¼-in. " 6 50 "
½-gal. " " 1½-in. " 7.00 "
In 500 lots, 50 cts. per 100 less.

We have also a good stock of one and five gallon cans at regular prices.

◆

Glass Honey-Packages

Anticipating a demand for honey jars and bottles we have put in two car-loads of stock before the summer shut-down of the glass-factories, so that we are prepared to furnish the various jars listed in our catalog. We have also a few odds and ends of stock, such as we formerly listed, which we offer, to close out, as follows. We can not duplicate these when present stock is sold:

1-lb. tin-top tumblers, No. 789, 5 bbls. of 200 each, at $4.50 per bbl.

1½-lb. tin-top glass pails, No. 778, 2 bbls. of 100 each, at $5.00 per bbl.

Large lb. tin-top glass pail, No. 777, 1 bbl. of 150, $5.00.

Small lb. tin-top glass pail, No. 776. 1 bbl. of 200, $5 50.

1-lb. Oaken Bucket tin top, with wire bail, 1 bbl. of 150 for $5.00.

These prices are all a dollar less than we used to sell these tumblers and pails at. We have also a little loose stock which we will pack and include at same rate.

Wide-Mouth Mason Fruit-Jars

The car-load price on Mason fruit-jars is over a dollar a gross higher this year than last. We carried over quite a large stock, which we will sell at the same prices as heretofore—namely:

Pint	doz., 52 cts.;	6 doz., $3.00;	12 doz., $5 75
Quart	" 55 cts.;	" 3.10;	" 6 00
Half-gallon	" 75 cts.;	" 4.10;	" 8.00

Triumph wrench, 15 cts. each.

Ball's waxed rings, 5 cts. per dozen. These are far superior to rubber rings for fruit-jars, and cheaper.

In addition to the regular style of Mason jars we have a stock of wide-mouth special Masons, with 3-inch opening. These are especially desirable for canning large fruit whole, or for packing chunk comb honey. These jars are of extra quality, and cost $1.65 per gross more than the regular pattern. As we do not list them, we offer our present stock at an advance of 10 cts. per dozen, $1 20 per gross, on any size. They have zinc caps and rubber rings. We have no wax rings of the right size to fit these jars. They are a bargain at this price.

◆

Caucasian Queens

We can spare a limited number of imported Caucasian queens, received direct from the best breeders in Caucasus. Prices as follows:

Extra select Caucasian imported queens	$15 00
Select Caucasian imported queen	10 00
Extra select untested Caucasian-Italian queens, from Caucasian mothers mated with Italian drones	3 00
Select do	2 00

Orders filled in rotatation. Delivery begins about July 15.

◆

"How to Keep Bees"

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Finally, with all due deference to the authors of excellent books on bee culture which we have already, my opinion is that this new book, "How to Keep Bees," is the best one for a beginner, or one who does not wish or expect to keep more than a dozen colonies, that has yet come before the world.—A. I. Root, in Gleanings, July 1.

Price, $1.00. Postage 10 cts. extra.

◆

Gleanings' Contests

Second-Prize Photo.—Very liberal awards for best photos of apiary and other bee-keeping objects of interest. Full particulars on application.

Fair Contest.—Gleanings offers prizes of $10, $5, $3 and $2 for the largest list of subscribers taken by agents during Fairs throughout the country this fall. Here's a chance to make money on regular commissions and prizes. Write for entry blank and particulars.

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MEDINA, OHIO

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BEE JOURNAL
Oldest Bee-Paper in America

(Entered at the Post-Office at Chicago as Second-Class Mail-Matter)
Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor
CHICAGO, ILL., JULY 20, 1905
Vol. XLV—No. 29

Editorial Notes and Comments

Locality in Bee-Keeping

A few years ago it became somewhat the fashion to make a joke of the matter of locality, possibly because some attributed to locality things not fairly due to it. But its real importance can not be pooh-poohed out of existence. The fact that in Australia bees are busily working at Christmas, and are in winter quarters July 4, is a mere matter of locality; as also the fact that in the southern part of the United States bees are at work weeks before they are out of winter quarters in the North.

But differences of locality are not alone shown by parallels of latitude. Differences of flora or other differences may be such that a plan of work in a certain place may be excellent, while not at all appropriate in another place only a little distance away. For example, a bee-keeper in a part of Illinois where clover is the chief, if not the sole, source of surplus, might be somewhat puzzled upon reading of P. H. Elwood's plan of management, and would be likely to say:

"I don't quite see how I could carry that out. I'm to dequeen no colony, if I understand correctly, until it is found making preparations for swarming. Then the cells are to be removed just before they would hatch, which would be in 10 days or more. Then a cell is given, and it will be another 10 days before the young queen will lay, or something like 3 weeks after the colony is dequeened. Then we are told, 'This operation should be timed so the young queen will begin to lay at the time of the opening of the main harvest.' That is, the dequeening must take place when the bees are found preparing to swarm, and it must be about 3 weeks before the opening of the main harvest. But bees don't prepare to swarm till the opening of the main harvest; so how can I dequeen when they are found preparing to swarm, and yet do it 3 weeks before the harvest? I don't understand it at all."

He will understand it better if he understands that Mr. Elwood's main harvest is probably basswood, which comes later than the opening of the white clover harvest; so that it would be an impossibility for the said Illinois bee-keeper to carry out Mr. Elwood's plan, however good it might be in a basswood "locality" in New York State.

The moral of which is, that while one is to study plans and practices of bee-keepers in all localities, yet in applying the knowledge so gained one must keep clearly in view the difference in locality.

◆

Giving Brood to Shaken Swarms

In shaking swarms, some advise giving a frame of brood to hold the swarm, others say the frame of brood will make the swarm desert, and prefer no brood, while still others advise giving a frame of brood and then taking it away as soon as the swarm becomes sufficiently attached to the new home. Just how long it takes for them to become sufficiently attached may be an open question. J. A. Green, after saying that swarms deserted for him when given a frame of brood, was asked whether such desertion occurred on the day of shaking or several days after. He thus replies in Gleanings in Bee Culture:

> I believe they all came out again the day after they were hived. Two years ago a large percentage, to many of which brood had been given, swarmed out the next day. Some of them, though, were hived in only one section of my hive, with supers above. This season, all swarms, artificial or natural, were hived in two sections of the brood-chamber, generally with only starters in the frames, and without brood, except in the case of two or three afterswarms. Two or three days thereafter the lower section was taken away, leaving them in a brood-chamber six inches in depth, having the capacity of about five Langstroth frames. So far as known not one of them swarmed out. Of course, supers were given them at the time they were hived.

◆

Preventing Swarming by Dequeening

Some years ago a good deal was said about management by making colonies queenless to prevent swarming. P. H. Elwood used the plan successfully, but others reported failure. Possibly they did not understand correctly Mr. Elwood's plan, having an idea that th thing to do was to keep colonies queenless a longer time than was done by him. It seems, however, that Mr. Elwood's plan might be called requeening rather than dequeening, or, to be more exact, dequeening and requeening.

Here is Mr. Elwood's scheme of management, as given in the Bee-Keepers' Review by Irving Kinyon, who, with one other man, helped Mr. Elwood take care of 1200 colonies:

> "We discouraged swarming until we were ready to remove the queens. Then, if any were found preparing to swarm, the queen was removed, also one frame of bees and brood. If the queen was an extra good one she was put in an empty hive with the frame of brood. The next 6 or 7 colonies dequeened had their queens killed and one frame of brood from each taken to put with the queen that was saved, which made the increase.
>
> "The eggs that these queens would have laid, if they had been left in the hive, would hatch after the main honey-flow.
>
> "After dequeening began, each yard was gone through and the cells removed just before they would hatch. Since there had been no eggs laid for several days when the cells were destroyed the second time, the bees had given up all idea of swarming, but were very anxious to have a queen. We now select a cell from some colony preparing to swarm, place it in a West cage and give it to the dequeened colony. This operation should be timed so the young queen will begin to lay at the time of the opening of the main harvest, and this colony will have its share of surplus honey, as this plan prevents the bees from dividing their working force at the beginning of the best harvest; and also gives them a vigorous young queen during the honey-flow. In destroying these cells we *must be sure* that we don't skip even a small one, or it may upset the whole plan."

◆

Freshly-Hived Swarms Deserting

A common question from beginners runs something like this:

"I hived a swarm, and the next day it sailed off to parts unknown. What shall I do to prevent such a thing in the future?"

The most frequent cause of such desertion is heat. A hive unshaded, standing out in the broiling sun with a very small entrance and all the rest closed tight, is a pretty warm place in which to set up housekeeping, and one can hardly blame the newly-settled family for moving out.

The remedy is not difficult to imagine. If possible, let the hive be in a cool, shady place. A temporary shade, and sprinkling with water will serve a good turn. Give plenty of chance for air. Some practice leaving the hive partly uncovered for two or three days. Some give two stories to the swarm, taking away the lower story after two or three days. Either of these plans provides to some extent against an overheated dwelling. Some practice giving a frame of brood to the swarm, with the idea that the bees will feel they can not afford to abandon so valuable a piece of property.

In any case, if all laying queens are clipped no prime swarm can abscond unless it joins, or is joined, by some other swarm having a queen with whole wings. The queen with clipped wings may be lost, but it is better to lose the queen alone than to lose both queen and swarm.

Miscellaneous News Items

Prof. A. J. Cook and Wife, of Los Angeles Co., Calif., called at this office last week when on their way to spend a year of travel and study in Europe. Their daughter, Miss Bertha Eldredge, will accompany them, and devote herself to music while abroad. They expect to sail Aug. 19, in the meantime visiting relatives in the East. Prof. Cook holds his 63 years wonderfully well, scarcely looking a day older than when we first met him. California climate and other things seem to keep him young in looks and spirit even if they can not stay the passing years.

Prof. Cook will continue to write monthly for the American Bee Journal while he pokes around various places in Europe. So we can all anticipate some interesting articles from his kindly pen during the ensuing year. And, meantime, all will join us in wishing the three globe-trotters a safe journey across the Atlantic, and a pleasant and profitable year on the other side.

* * *

A Visit to Dadant & Sons.—For many years we have had a desire to visit the leading bee-supply manufacturers and dealers in the United States, who are also our leading advertisers, and finally the opportunity to begin doing so came last fall. We started out in October, and, as most of our readers know, we have had the pleasure of visiting quite a number of such firms, and also of telling something about them in the American Bee Journal. We believe that these personal and often somewhat minute introductions have been appreciated both by the firms visited and by those who read this paper regularly, who, very likely, are their patrons in a business way.

The last firm that it was our good fortune to see was that of Dadant & Sons. For more than a quarter of a century it was "Chas. Dadant & Son." (Doesn't that look and sound familiar?) But since the elder Dadant passed away, in 1902, his son "C. P." has taken into partnership with himself two of *his* sons—Louis C. and Henry C., the former being in his 26th year and the latter in his 23d.

The first home of the Dadants, and also their factory, are located right in the woods, about two miles from Hamilton, Ill., for they began by growing grapes and keeping bees, and their present business has developed slowly from these. There are so many trees around their factory and other buildings that it is impossible to take a good view of them from any side, however we succeeded in getting a snap-shot of the main factory, or at least the smoke-stack, as shown herewith.

One of the buildings, constructed of iron, and then painted, contains only beeswax, and holds something like 20,000 pounds. It is usually kept full, for the Dadants believe in having on hand a large supply of beeswax so as not to run out of the only suitable material for making their excellent comb foundation.

The original firm of Chas. Dadant & Son was founded in 1863, and began the manufacture of comb foundation in 1878. When they began it was the intention to make only for their own use, as they were extensive bee-keepers. The first year they made 500 pounds, but they made it so good that others wanted some of it, so the second year they made 2000 pounds, the third year 6000, and so kept on, some years making more and some years less, until during the year from July 1, 1903, to July 1, 1904, they made and sold over 115,000 pounds, which put them away up at the head of the manufacturers of comb foundation. If this season should continue as did that of 1903, they may again reach their banner record.

THE LATE CHAS. DADANT.

MAIN FACTORY OF DADANT & SONS.

One secret of the wonderful success of the Dadant foundation is that every inch must be equal in every way to sample. We saw how they make it, and were surprised at the extreme care with which every part of the process is conducted. The least defect is detected by the quick, clear eye of the young lady who lays each sheet on the paper put down by another young lady. Thus it is sorted and papered as it comes from the mill. These young ladies exchange places occasionally to relieve the monotony of the work.

Mr. Joseph Saugier is the man in charge of the milling of the foundation, which position he has held for 23 years, and he figures that if all the sheets of Dadant foundation he has made were put end to end, they would reach two-thirds of the way around the earth. In a few more years Dadant's foundation will encircle the globe.

The bulk of the foundation made by the Dadants is the "Weed process," which refers to the method of sheeting the wax before milling it. Mr. Leon Saugier, Mr. Dadant's son-in-law, and also brother of Joseph Saugier, is in charge of this part of the work.

They have a certain foreign trade that for some reason will have only the foundation made by the old or dipping process of sheeting the beeswax.

The Dadants have always been famous as bee-keepers also. For 40 years they have run several hundred colonies for extracted honey at the home as well as at out-apiaries. For 12 years—from 1872 to 1884—Mr. C. P. Dadant alone managed 550 colonies in 5 or 6 apiaries. One year (1884) they had 45,000 pounds of extracted honey. This was their largest crop, from which they realized $2800 net of all expenses. They use a very large hive, taking 10 Quinby loose-hanging frames, size 11½x18½ inches, outside measure. Their hives face south, and on the west inside of the hive is a division-board or dummy, and the back end is made of two boards. On each of some of the best colonies (when we were there, June 21), there were 3 and 4 shallow extracting-supers nearly full of honey. And they had had only *one* swarm in their 4 apiaries of a total of 250 colonies, so far this season! They have practically no swarms. They run their apiaries for *honey*, and not for swarms! They believe in large hives—big colonies—and then they always get the honey—if it is to be had from the flowers. Their methods are successful, and they know it. When we enquired why they did not push the sale of their special or Dadant hive, Mr. D. replied, "Oh, bee-keepers think it is too expensive." We found it costs only about $1.00 more than the ordinary hive. Surely, that should not prevent business bee-keepers from buying them, if by their use and following the Dadant sys tem of management larger crops of honey can be secured.

Mr. Dadant has promised to write a series of articles on their hive and management for the readers of the American Bee Journal in good time for the season of 1906. To the bee-keeper who desires to make a financial success of producing honey, those articles will be worth hundreds of dollars. There will be no theory about them. The Dadants produce the honey, and can give a good reason for the faith that is in them regarding this matter.

It may not be known to all our readers, but Chas. Dadant & Son were among the very first to make successful the importation of Italian bees on a large scale. They received as high as 400 queens a year, and sold them at $10 each, or $20 for a colony of bees with an imported queen. Of course, this was long ago—in the early 70's. Mr. Chas. Dadant made a trip to Italy at a cost of $400, in order, if possible, to discover a method whereby a large number of queens could be safely shipped to this country. Finally a plan was devised, each queen being put in a very small nucleus box, then 22 of the boxes were packed together and shipped. Often the whole 22 queens, or at least 20 of them, would arrive safely; then, again, all would arrive dead except 2 or 3 in a shipment. The business continued successful and profitable until competition, and unfaithfulness on the part of their Italian shipper, put an end to it.

Mr. Dadant is fortunate in his family. Besides his good wife (who, by the way, is a most faithful and excellent mother, cook and housekeeper), he has three sons and four daughters. Louis and Louisa, the two oldest, are married, the son living on the old homestead which is located only two or three rods from the main factory, and the daughter about a half mile away. Henry and Maurice are the other two boys. Louis and Henry are graduates of the University of Illinois, and Maurice has still three years of work there. The daughters at home are Valentine, Clemence and Harrietta, the last being the "baby" of the family, about 10 years old. Miss Valentine, who has also attended the University, is president of the Hamilton Library, an organization formed three years ago through her efforts, and of which the town is justly proud. It is open to the donation of good books, and has now almost 1000 volumes.

Last year Mr. Dadant built a most beautiful and substantial brick house, from which at the rear the majestic Mississippi River can be seen for nearly 14 miles. It is just opposite Keokuk, Iowa, from which city it looks like a young college in the distance. He and his family moved into it last December.

Hamilton, the home of the Dadants, is just across the river from Keokuk, a fine railroad and driving bridge, three-fourths of a mile long, spanning the Mississippi at that point. Hamilton is a city of 1300 inhabitants, and Keokuk about 15,000.

Mr. Dadant is vice-president and director of the State Bank of Hamilton. Louis C. is also a director. Mr. Dadant's property interests in and about Hamilton are extensive. He is the leading business man of the city, and one whom all respect and delight to honor.

We shall not soon forget our very enjoyable visit with the Dadants. We were royally entertained, Mr. Dadant devoting himself wholly to us from the time of our arrival until we departed. We understood how he could thus absent himself from the business when we saw how his sons, Louis and Henry, made things hum in the office and factory. They are taking right hold of the work, so that Mr. Dadant is required only occasionally during the day or week simply as counsellor, his advice and experience often being of inestimable value.

In next week's issue we will complete the account of this trip, telling of a visit to the old city of Nauvoo, and also of an 11-mile carriage drive to see Mr. E. J. Baxter, a brother-in-law of Mr. Dadant, who is another large and very successful bee-keeper.

Contributed Special Articles

Light-Weight vs. Full-Weight Sections

BY L. V. RICKETTS

FOLLOWING my article on light-weight sections being one cause of the small demand for section honey, on page 229, I will say that with the sections now in general use, a 24-section case of No. 1 separatored honey will weigh not more than 22 pounds, on an average, which is 14⅔ ounces per section.

As stated by M. A. Gill (page 213), these sections were at first intended to hold one pound of comb honey, which they did, on an average, as they were used without separators, but since separators have come into general use, and as by their use the holding capacity of sections is reduced, we find that the original 16-ounce section of honey has been reduced to approximately 14⅔ ounces; yet it is being sold to the consumer as a pound of honey.

This reminds me that for many years, and until about a decade ago, a well-known soda company put up their soda in two different sizes of packages, one size contained 12 ounces, and the other 16 ounces. For many years the lighter weight package was the one generally sold, but finally some of the more enterprising of our grocerymen adopted the heavier package. For a long time both sizes were sold, one groceryman selling the 16-ounce, while his competitor across the street sold the 12-ounce size, yet the price was exactly the same—10 cents per package. But this state of affairs has changed by the light-weight packages being forced out of the market.

I predict that within 10 years from to-day the average weight for a 24-section case of No. 1 separatored honey will be 24 pounds, or 16 ounces per section. This change will at first be made by a few bee-keepers adopting a section large enough to hold 16 ounces of No. 1 separatored honey, thereby increasing the sale of their product and finally forcing others to follow in their foot-steps.

Imagine a butter manufacturing company producing bricks of butter weighing only 14⅔ ounces coming in direct competition with a company producing bricks weighing 16 ounces. Would they not soon be forced to increase the weight of their product, or be driven from the market? A "pound of comb honey" and a "section of honey" are synonymous terms in the minds of the average consumers of section honey, yet they are learning to their dissatisfaction that when buying a section of honey they seldom get a pound.

Leo F. Hanegan (page 268) says in his locality they have trouble in getting 4¼x1⅞ sections to weigh 22 pounds to the case of 24 sections, on an average, when used with separators when being filled, while across the country 8 miles from his locality the bee-keepers must use sections of 1¾ inch width in order to keep them from weighing over 23 pounds per case of 24 sections. He says: "Our market demands an average of 22 pounds per case of 24 sections of No. 1 honey," and asks me to name one size of section for those two localities. My answer is to use a section a little larger than the largest one mentioned by Mr. Hanegan—one that will average 16 ounces to the section of No. 1 separatored honey. No one expects to have each and every section weigh exactly 16 ounces.

The idea is to have them average that amount as nearly as possible. I don't believe the old man, "Locality," will assert himself so forcibly as to make it necessary to use two different sizes of sections in order to have them average 16 ounces each.

As to Mr. Hanegan's market demanding 22 pounds per case, I think he meant the wholesale market or commission houses, and not the real market, which is the consumer. It is this market that we must endeavor to please with regard to the weight of sections, and not the large buyer, for if we have plenty of those who buy and consume our product, there will be no difficulty in finding the large buyer. There is where a great mistake is made by bee-keepers trying to please the large buyer instead of the consumer.

Perhaps the principal argument advantage by the advocates of light-weight sections is, that the consumer often prefers them, as they cost (when sold by weight) a cent or two less than one of full weight. With reference to this I will say that a customer who is too poor to buy 16 ounces of honey at one time is too poor to be reckoned as a purchaser and consumer of honey. And a family that can not use 16 ounces of honey before it goes to waste is not to be considered as a consumer of honey. The facts are that those light-weight sections are preferred by some for the purpose of some one to receive pay for something they never possessed. This "some one" may be either the producer, wholesaler, or retail merchant, but it is never to the best interest of the consumer or the bee-keeper at large, as it tends to decrease the demand for honey, and also its consumption.

Whitman Co., Wash.

Knowing the Age of Bees Quite Necessary

BY G. M. DOOLITTLE

MANY seem to suppose that a knowledge regarding the age of bees is of minor importance, and something which only scientists should be interested in. This I think is a very mistaken idea, for in all our manipulation of colonies we shall succeed only as we keep the right proportion of bees of all ages in each or any colony we may make.

Nothing in the bee-business has given me more pleasure in the past than experimenting to ascertain the different ages of bees, and the different offices they perform at certain ages when in a normal condition. When these conditions are not complied with the colony is thrown out of balance, and in that unbalanced condition we find that bees will feebly perform any office of the hive till they can arrange matters normally again. Then it is that we find very young bees going into the fields, when they will bring less than one-half the load that the bees over 16 days old will carry. Old bees will rear queens which are not of half the value of those reared by the younger or nurse-bees, and some workers will even lay eggs, while this office is usually restricted to the queen.

In these experiments I have found that queens reared under the most favorable circumstances attain the average of 4 years, and that, too, under the great stimulus which is brought to bear on them under our modern bee-keeping, wherein a queen is coaxed to lay more eggs each year than did the queens of our fathers. In this way queens are constrained to lay from 3000 to 4000 eggs daily, while in box-hive times, if a queen layed from 2000 to 2500 eggs in a day she was doing remarkably well.

On one occasion I had a queen that lived and did good work till she was nearly 6 years old, laying prolifically till within about 3 months of the time of her supersedure, while several have lived to be nearly or quite 5 years old.

Then I have had queens reared in little nucleus boxes, as was quite the general way 30 years ago, which would not live more than 5 to 9 months, and never keep more than 4 or 5 Langstroth frames full of brood while they lived. Those rearing queens in this way were generally the ones who did not think that there was anything worth looking after regarding the age of the bees, which bees were making the best they possibly could out of the bad plight into which their would-be bee-keeper placed them. In a state of Nature neither all old bees nor all very young bees rear queens, unless some accident happens to force them to do so; and I have found it a good plan not to adopt the "accident" policy if I wish to rear queens which will tend toward an improvement in the bees in the apiary.

The worker-bee rarely attains to a longer life than 45 days during the months of June, July, August and September, while those emerging from their cells in September may live, many of them, till the next May or June, if not injured by our winters, their life being prolonged above the 45 days just in proportion to the work that they do, or the amount of hardship they are required to undergo. Never have I known a worker-bee to survive a single year, and I do not believe it possible for such a thing to come to pass.

I find that, approximately, the bee is in the egg form 3 days; in the larva form 5½ to 6 days, and in the pupa form 12 days. After emerging it takes the bee from 6 to 12 hours to get fully straightened out, soon after which it begins preparing chyle for the larvæ of the hive, doing this work very largely till it is 6 days old, when, if the weather is pleasant, it comes out of the hive for the first time to take an airing and mark its location, still continuing its work inside of the hive—feeding the brood, building comb, evaporating nectar, etc.—until it is 16 days old, when it goes out to labor as a field-bee, after which it does very little of the inside work of the hive, and dying of old age from 25 to 29 days later. While these bees that are over 16 days old can be forced, through being made queenless, to prepare chyle and rear queens, still queens so reared will work after about the same order as will the workers at field-work, when forced out after honey and pollen when only 5 or 6 days old. In all our artificial increase of colonies it is well so to form them that bees of all ages will remain in each part of any division made.

I find that the life of the drone is nearly the same as that of the worker under favorable conditions, but a very precarious life he lives; for at any time when a scarcity of honey prevails, and the bees are not fed by the apiarist, the drones are unmercifully driven from the hives or are killed by the workers. I have seen it stated that the drones do not live one-half the time the workers do, the proof of which was the writer's experiments made with a nucleus colony. All bee-keepers should know that drones are "commoners;" that is, they have the privilege of entering, unmolested, any hive that allows its own drones to remain, and that if they are driven from one hive they are allowed to enter another which is retaining its drones. Such is the experience with all close observers along this line.

A nucleus having a queen just fertilized has no more need of drones, and persecutes them till they leave, or, if they persist in staying, kills them. But with an isolated hive, and feeding when there is a scarcity in the fields, it is quite easy to prove that drones will live from 40 to 45 days.

It is a rare thing that any drones live over the winter, but in one or two cases when the hives were unusually full of stores, all during the late summer and fall months, I have had them live so as to be flying in February, but they seem to wear out faster during a state of inactivity than do the workers, for with the advent of pleasant days in the latter part of March and the first of April they are soon all gone, and that when they are not driven from the hives.

Onondaga Co., N. Y.

Convention Proceedings

Report of the Chicago-Northwestern Bee-Keepers' Convention, held at Chicago, Ill., Nov. 30 and Dec. 1, 1904.

(Continued from page 490.)

ABSCONDING OF SHOOK SWARMS.

"How to prevent absconding of shook swarms."

Mr. Smith—I find hiving them on a frame of brood as a rule would prevent that.

Dr. Miller—May I ask Mr. Smith whether he finds in hiving on a frame of brood they start cells on that brood?

Mr. Smith—Yes, I have found that also; not as a rule, though.

Dr. Miller—One of the writers says, Give them a frame of brood and within two or three days take it away again to prevent them starting queen-cells.

Mr. Becker—If I have two swarms that come out at the same time I hive them on a frame of brood, and I never had one yet that left if I did that: and I always do it if I have two swarms come together.

Dr. Miller—Are you talking about natural or shaken swarms?

Mr. Becker—Natural swarms.

Mr. Snell—I never practised that very much, but whenever I have done so I have given the colony a frame of brood, and as yet I have never had them desert.

Mr. Whitney—I have practised shaking swarms and I have never had the shaken swarm leave the hive. Sometimes if I shake them on comb I take the queen with them, and I never had them leave.

Mr. Hutchinson—I never have had any experience myself with shook swarming, but quite a number of those who have written articles on that subject have made one point quite clear, that the bees should be pounded and disturbed and jarred until they fill themselves thoroughly with honey. The natural swarm fills itself when it starts out, and when that point has been attended to there has been very little trouble with absconding. Whereas, if we simply take them off the combs without any of this previous disturbance there will quite frequently be absconding.

Mr. Abbott—I want to ask if the people who practise shaking swarms give them the queen at once? The question is asked if they start cells on the comb? Do they not have a queen given them at once?

Mr. Hutchinson—They have the old queen.

Mr. Abbott—Suppose you make two or three swarms out of a colony?

Dr. Miller—We don't.

Mr. Abbott—I thought if they would give them a queen, and they had brood, I couldn't see why they would start cells.

Dr. Miller—As a matter of fact they do start cells. There are two things you are getting a little mixed, the absconding and the starting of queen-cells. The point is, Do they start cells? They have started cells for me in more than one case, and perhaps you who say they do not abscond, if you had examined carefully you might find that they had started cells. What they start cells for I don't know. Mr. Stachelhausen says they start cells and he gives them the sheet of brood, holding them there so that they won't abscond. Whether they would go on with that and rear a queen and swarm again I don't know, because I always stopped them and took them away. But it is, I think, a pretty common thing that they start cells when you give a frame of brood to a shaken swarm.

Mr. Whitney—Perhaps I don't understand. When I said they didn't abscond when I put them on frames of comb it is simply old combs with the queen. I don't understand that they would commence queen-cells under such circumstances as that. But when I give them uncapped brood and eggs I have never had them trouble me by attempting to abscond, but they do rear queen-cells, and they will rear a queen unless you introduce one, of course. I would think if they didn't commence making queen-cells you would have a very weak colony of bees very soon. When parts of mine leave the hive sometimes I have shut them in for 36 hours, and especially if I move that hive away from the old stand; and I have never had any trouble, and I have shaken swarms a great many times.

Mr. Abbott—I made shook swarms long before I ever heard tell of shook swarms, at least I suppose I was doing the same thing. I did this: I took a colony of bees and divided it up into two or three colonies sometimes and gave them all a laying queen. I had the queens, maybe a dozen, before I commenced my work, and with each colony went a queen, turned loose at once, and they had one frame of brood and the rest foundation, and under such circumstances I have never had any cells started or had any trouble. My idea was to bring out the point that the way to make shook swarms is to keep a number of laying queens on the colonies you want to divide, and then turn the laying queens loose at once, and I don't think they will build any cells if you do that.

Mr. Hutchinson—If I understand the matter, they do not shake the bees from the colony until they have made preparations for swarming; and the bees are shaken off on the old stand and the brood given the bees on the new stand; and the old queen and all of the bees, or nearly all, go on the old stand, and the flying bees that come back join that, and that has a queen; and what we have been talking about is the giving of a new swarm a comb of brood to prevent them absconding, and sometimes they go to work and build cells on that. That is all the division they usually make; they do not divide them up into several parts; they just have the two; and the old combs of brood are usually given a queen-cell nearly ready to hatch, or else given a laying queen, preferably a laying queen. If it is given, then there is no use going to work and hunting up the queen-cells and destroying them, because that colony and laying queen will destroy them themselves.

Mr. Smith—I believe it is their instinct for ther own preservation. You disturb a colony of bees, or alarm them, and they will immediately start queen-cells, but they will cut them out again after they find their old queen is secure, in a day or two. I think that is the reason; it is the fear of their queen being injured or taken from them that they start queen-cells.

Mr. Snell—I would like to ask any one who has given a shook swarm a queen, and then that colony started cells, if he has ever known them to be matured and a swarm made from such colonies? I would doubt their doing it very much.

(Continued next week.)

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Putting Weak Colonies Over Strong Ones

I see that you wish everybody to report results in putting a weak colony over a strong one. We tried 12 that way and we had no queens killed.

We were very well satisfied with the results. We have 8 pairs still together. May not the use of hybrid bees explain failure in other cases? Missouri.

Answer.—I don't know. It doesn't seem that there should be any difference between hybrids and others, but sometimes there is a difference where it is not suspected.

Putting On Supers—Dividing for Increase

1. What is gained by putting the second super below the first one?
2. Why put on a second super until the first one is full?
3. Why not take the super off when full, before putting on another one?
4. How long is it after the egg is deposited in the cell until the cell is capped.
5. At what time and in what way are the young bees fed?
6. How long is it after the old queen leaves the hive with the first swarm until the new queen meets the drone and is ready to begin laying?
7. I live in southwestern Missouri. Would it be advisable to divide the bees in a hive now? My bees have failed to swarm any this season, and I should like to increase my stock. Can one not having experience divide them successfully?

How late would it be advisable to introduce new Italian queens into old colonies, in this latitude? I have only one Italian colony in 11, which I got by introducing an Italian queen in September, 1904. I had no experience at that time, but met with the best of success, and now the colony is very strong and working nicely. I have had no swarm from it. Would it not be better to introduce new queens about Aug. 1, in this locality?

9. Would it be advisable to try to divide the colonies after the supers have been put on. Missouri.

Answers.—1. The bees will begin to work sooner in the new super if it is put under than they will if it is put on top.

2. After the first one is full, so that there is no room for the bees to store, it will still take them some time to finish up the sealing so the sections are fit to take off, and the second super gives them room to work in during that time.

3. For the reason already given. Try two colonies side by side the two ways and see which you like best. At the present writing (July 10) very few of my colonies have only two supers on. Some of them have four, and a few five.

4. Eight or nine days.

5. They are fed by the nurse-bees for 5 days or more from the time the larva hatches out of the egg until it is sealed over.

6. The young queen will emerge from her cell about 7 or 8 days after the prime swarm issues. When 5 days old or older, she will mate. In 16 days or more from the issuing of the prime swarm she will begin laying.

7. Yes, by reading up well in your book of instruction so as to have general principles well in mind, you ought to be able to make increase successfully on first trial, and there is plenty of time for it yet.

8. You can introduce any time from now until bees stop work.

9. Yes, if increase is important, although you must remember that you can't have your cake and eat it too, and if you turn the force of the bees toward increase it will interfere with the honey crop. There are localities, however, where the harvest is heavy late in the season, and in such a locality it is possible to get more honey by dividing early. In most places a colony that works straight through without having its forces divided will store more than the colony and its increase together would store.

Catching the Drones—How Many Colonies to Keep

1. When should the drones be caught?
2. Why are there so many when it is only necessary for them to meet the queen once?
3. I live in the south central part of the State. Is it a good bee-district?
4. How many colonies would it be advisable to keep? Indiana.

Answers.—1. Any time. Prevention, however, is better than cure. Allow very little drone-comb in your hives and you'll have few drones.

2. For greater safety to the queen. If there was only one drone for each queen, the queen might make many trips before mating.

3. Yes, but some parts are better than others.

4. Probably not more than 100, and perhaps less than that if other bees are within 2 or 3 miles.

Transferring Bees from Box-Hives

I have a colony of bees in a box-hive. There are no frames in it. The comb is built every way in the brood-chamber. I would like to get them into a modern hive. I have a new 10-frame dovetailed hive. Can I put the new hive on the old stand and set the old hive on top of it, and have the bees go down and build comb in the new hive, getting the bees out of it in that way? How can I get them into the new hive? When would be the best time of year to do it? They swarmed June 11. Michigan.

Answer.—It is not certain just how you will come out if you set the old hive over a new one. If the old hive is quite large, and the colony weak, they may not build down into the new hive. If strong, and the season good, they may build down satisfactorily. If they do not build down, it is perhaps as well to leave them right where they are, so as to build up strong for winter; then next year you can transfer 3 weeks after swarming, when there will be no worker-brood in the hive, driving out the bees, and melting up the comb, unless you want to save some of the best of it. The probability is that the bees will winter better and be stronger next spring if you leave them in the old hive, as the colony was probably not so very strong after swarming.

Bees That Never Swarmed

I bought 7 colonies 2 years ago, and they have never swarmed. Isn't that a very uncommon thing? ILLINOIS.

ANSWER.—Yes, it is a most decidedly unusual thing, and if you have bees that will do good work and not one of the whole 7 colonies offer to swarm in 2 years, you have something to be greatly thankful for.

Fastening Foundation Starters in Sections

1. How do you fasten starters in the sections where you put them in say 3¼ inches long? I can not keep them straight, as they are not fastened at the bottom.

2. I find that when I leave as much as ¾ of an inch space between the bottom of the super and the frames, the bees invariably fill in the space with comb and honey. Is it not best to leave a space about ⅜-inch? MISSOURI.

ANSWERS.—1. At our house they are put in with a Daisy fastener. The best way to have the comb fastened well at the bottom is to use a bottom starter ⅝ inch.

2. Of course they will build in a space of ¾ of an inch. And they'll build no little in a ⅜-inch space. Don't have it more than ¼ inch.

Preventing Robbing—Using Queen-Cells—Italianizing—Starting Nuclei Late

1. How can I prevent robbing among bees?

2. I have a queenless colony with 6 queen-cells started. Can I use some of them to any advantage?

3. I have several colonies of goldens and two of blacks. Would I best get rid of the black queens?

4. Is it too late in the season to start a new colony with two frames and a queen? KENTUCKY.

ANSWERS.—1. Robbing is likely to be started if honey is left exposed where bees can get at it, especially at a time when bees are not gathering. Avoid anything of that kind. When there is nothing to be had in the fields, sometimes robber-bees are so troublesome that even opening a hive and taking out the combs will start robbing. At such times avoid opening hives, or if you already have a hive open and see by their darting into the top of the hive that robbers are getting the start, close up at once, and if for any reason you *must* handle the bees, do it under a tent, or wait till nearly dark before opening the hives. Weak, queenless colonies fall an easy prey to robbers. Either break them up or supply them with a queen. Keep all colonies strong and provided with good queens, and don't do anything to tempt the robbers, and you'll not be likely to have much trouble.

2. Yes, if you wish to have more queens, each cell may be given to a nucleus.

3. Yes, if you find them inferior to the others, as they probably are.

4. No, you can start in August, by giving enough help.

Location for Keeping Bees

I am thinking of going to Arkansas, or western Kansas, to keep bees. The forage is sweet clover in both places. In which place will bees do the best? KANSAS.

ANSWER.—That isn't a question that can be answered in a single word. You will find good and poor locations in both States. The best way will be to make a personal visit and find out whether a certain location will suit you. The number of bees already on the ground must be taken into consideration. The best location in either of the States is not the best place for you if the ground is already occupied by others. If you find a place where there are no apiaries, only some one with a few colonies who has no intention of increasing the business, and whose bees are doing remarkably well, that's likely to be a good place for you. But remember that you can't count on as good results with 50 or 100 colonies as you can with only 2 or 3.

Queen Laying Several Eggs in a Cell

I have a queen that I reared in a nucleus. She is of good size and pure Italian; very gentle. I have seen her lay while holding up the comb, but I have counted as many as 6 eggs in one cell. What do you think is the matter with her? She is in a hive, but the bees cover only 4 frames in it. Do you think there ought to be more bees in it so the queen could have more room? INDIANA.

ANSWER.—It is nothing unusual for a good queen to lay more than one egg in a cell when she has so small a force of bees that she hasn't room to spread herself; although it is unusual for her to lay so many as 6 in a cell. If she keeps supplied with eggs all the cells that the bees cover, you needn't worry about her throwing in a few for good measure. If, however, she lays duplicates in a few of the cells and leaves other available cells empty, there is something wrong, and if she persists in that line of conduct she should lose her head. But it happens sometimes that a queen will lay in an abnormal manner for a week or so, and then straighten up and lay as a good queen should.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B. Rural, Toledo, Ohio.

BEES AS A NATURE STUDY.

Prof. Bigelow, on pages 373-5, gives us a most delightful article. Hard work to handle it adequately in the limits of this department. It is well adapted to stir up *some* of that strangely large proportion of intelligent people who keep themselves oblivious to Nature's multiple and perennial miracles as shown in the transformation of insects—things are created before our eyes, not out of nothing, but out of incongruous previous things. And what an enormous mass of world-work—world's scientific work—is yet to be done relating to insects! Of insect species 30,000 have been *described* (how little that is!), but of undescribed species there yet remain nine or ten times as many—say over 250,000! Most of the lesser host of 30,000 still need to have their life history and characteristics studied up. I suppose many ambitious young men and young women have *mourned* that there was nothing of world-embracing significance handy for one to do any more. Just let them look around here. Here's original scientific work that will last as long as the coal-beds do. Let such a youth select one or more insects for close acquaintance, and put himself in communication with some institution or university that works at this branch of Nature work.

"How to Make a Cage for Your Canary Out of Old Umbrella Ribs," is it now? Fine specimen of Prof. Bigelow's scorn for the clap-trap arrangements of previous workers when they studied bees a little. It seems that they have been very inconsistent, in that they use costly and nice apparatus to study creatures of much less importance than bees. Still we must not forget that sometimes very costly and fine-looking apparatus works—not half so well as the clap-traps. I object decidedly to calling the one-frame observation hive a failure. Allen Latham has recently been making it a success to a remarkable degree. There is room for both the Bigelow Educational Hive and the one-frame kind. Let there be no fighting and calling names between them. The former is new; and a season's work with it is likely to result in considerable modifications—strange if it didn't. I notice Prof. Bigelow speaks of letting the bees run in, and letting the bees run out, instead of speaking of putting the bees in and taking them out. I infer, therefore, that he has not continued very long working with bees—in all weathers, and in all their moods and tenses—and hardly knows yet how contrary they can be about doing just what one wants them to do on mere asking. Students well inured to bees are likely to prefer in large measure free manipulations in the open to bee-tight ones indoors.

The feeder arranged with a powerful magnifying lens attached, to study the bee's members "on the critter," and especially the ligula and its way of taking in honey, I would commend in the highest terms. I sadly fear that most of our folks have never taken in the idea yet that bees *can not* suck honey through a straw as breathing creatures can. Just how far suction is got up some other way than by breathing, and just how far the fluid is paddled up, or chain-pumped up, or swallowed up, or by capillary attraction wheedled up, are fascinating propositions to study.

What we are after most greedily is the seeming impossibility of a hive in which any part can be seen at will *without disturbing a bee.* We especially need to see them "at home" with home feelings and quietness. We want also a prosperous colony and not an abnormal and woe-begone one. We can dispense with great populousness, but we don't want the colony *too* small. The Bigelow Educational Hive provides for a colony of maximum strength (which is very well so far); but some of the bigger desirabilities, one can hardly see how they are provided for.

THE PUCKERING ALUM-WEED HONEY!

Alum-weed honey, eh? warranted to pucker a child's mouth so it can't bawl for seven hours! The demand for it should rise with the progress of the anti-race-suicide reform; but Brudder Smith will have to shell out advertising rates when he tells us his price for it. Page 376.

SUMAC HONEY AND BLOOM.

The honey that I call sumac (still a possibility of mistake) is amber or yellowish in color, and in quality not bad—but still not as good as I wish it was. When raw nectar it has a tang, a sort of sour, reminding one of the taste of sumac fruit (the red bobs), if you ever tried to eat them. My locality is strong on sumacs, especially *Rhus copallina*, which blooms far along in summer, much later than the other species. Page 361.

COMB HONEY IN CONFECTIONERY.

All right to experiment with honey, using wax and all, for confectionery, but look a little out. So little way as my experience goes, it is that honey always gets more or less of bad taste from contact with melted beeswax. Rather queer. Don't seem as though it ought to be so. Wonder if it is the detergent quality that makes the mischief—washes the wax and takes the impurities to itself. If that's really the case a little invention may come in here, too. Page 360.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

The Laying of Laying Workers

If you ever have much to do with laying workers, you'll find that one of their peculiarities is a preference for drone-cells in which to lay their eggs, and rather than to take up with worker-cells they will lay two or more eggs in each drone-cell, if drone-comb is present. It has been said that they prefer the larger cells because they can more comfortably reach to the bottoms of the larger cells to deposit their eggs there. If that be the case, a queen-cell ought to be still more to their liking on account of its great diameter. And in actual practice that seems to be the case, for it is not uncommon to find in a colony of laying workers a queen-cell with a plurality of eggs, sometimes as many as a dozen eggs in one cell.

So when a queen-cell has been found containing more than one egg, it has been counted a sure sign of laying workers. But it seems the rule can not be relied on as one without exceptions. About 10 days ago, in a prosperous colony whose queen was less than a year old and doing good work, I found a queen-cell containing three eggs! I called Dr. Miller's attention to it, and he said he had never seen or heard of such a thing before. Yet since then two other cases have occurred, one with three eggs in a queen-cell and one with two. Is there a conspiracy among the bees to unsettle our dependence upon a rule that has been heretofore considered without exception?

Roger's Song

Who loves the rose without a thorn? Not I.
  No guardian darts around her close,
  For every passing hand she blows,
With every touch her bloom is strawn—
I love no rose without a thorn. Not I.

Who loves the bee without a sting? Not I.
  'Tis but a stupid, idle drone
  May live a feeble life alone,
And be so dull and poor a thing—
I love no bee without a sting. Not I.

Who loves a maid without a will? Not I.
  A thornless rose, a stingless bee,
  A will-less maid, are not for me;
Give me the sweet wild briar still—
I love no maid without a will. Not I.

—Dorothea Gore Browne, in Sweetbriar.

Does it Pay to Double Up Colonies?

Mr. Allen Latham asks the above question, on page 438, and gives the following rather two-faced answer:

"Evidently it does or so many successful apiarists would not recommend it. Yet my own experience in doubling up has never been satisfactory in the results obtained."

Then he goes on to say that in a few days the doubled colony has apparently no more bees than the single one previously had on the same stand.

In the spring there are times when colonies dwindle away, and when they are taken with the "dwindles" it doesn't pay to double up, a half-dozen of them united will shortly appear no stronger than each single one did. Doubling such colonies has not been advised of late years. Indeed, it is not generally advised to unite two weak colonies in the spring if each has a good queen. In the fall it is advised, as both are likely to die if not united.

Doubling colonies in the spring is advised when a colony is queenless. Then is the time when the beginner finds it hard to believe that by reducing the number of colonies she will have more bees. She thinks that by giving to the queenless weakling a frame of brood from time to time she can coax it along and have it rear a queen. But if she has only two colonies, and one of them queenless in early spring, experience will probably teach her that reducing the two colonies to one will result in more bees, and more colonies as well, by fall.

Honey for the Toilet

Apart from the medicinal uses to which honey is and may be applied, are those connected with the toilet. A small jar containing honey should be kept on every washstand and in every nursery. Honey proves a panacea for most of the ills that flesh, or rather skin, is heir to, in the shape of cracked lips, roughness of the skin, blotchy patches around the mouth, which are most disfiguring to even the most beautiful, chilblained or chapped hands, sore and cracked heels, wind-caught ears, etc., which can all be prevented by this simple remedy.

The application is so easy, and no one can object to it, as they do to so many other remedies. After washing any part of the body suffering from any of the above unpleasantness, apply to the part affected, while still wet, a very little honey, by dipping the finger into the jar and smearing over. To those who suffer habitually in winter from any of these distressing complaints, the continued use of honey will prevent them from appearing. Begin to use as soon as the weather gets cold, or as soon as the wind begins to nip.—Irish Bee Journal.

Reports and Experiences

Light Honey-Flow So Far

This is the time when we should have our heaviest honey-flow, but up to 2 days ago the bees had barely made a living; now there is a light flow on and we hope the same will keep on getting better. Bees in general are in fine condition and we may have a fair crop yet.

F. Rauchfuss.

Arapahoe Co., Colo., June 26.

Good Clover Crop—Unsettled Weather

There is an abundance of white clover, but the weather is very broken—so much so that the bees are handicapped, and can not put in over half time. I lost 15 colonies through spring dwindling, and had to feed a lot of them. What are left are in good condition.

W. Irvine, Sr.

Webster Co., Iowa, June 19.

Season in North Central California

"One swallow does not make a summer," neither does a big rainfall make a respectable crop of honey. At least such is the observattion I am led to record in regard to the output of the bee-hives in that portion of California about the Bay of San Francisco. For nigh some 40 years bees have been kept on our place in the foothill north of Oakland, and about 12 miles directly east of the Golden Gate. As near as I can recollect our bees heretofore stored a fair, or, in most cases, a good crop of honey, every year we had over an average rainfall. This year, however, there is an entire failure of a crop; in fact, I have had some colonies make a fair storage of nectar in our dryest years.

The past winter and spring was above the average as to rainfall, in places it was much above the average, and extended over a long period. The nights, too, were cooler than usual. This state of affairs no doubt prevented the flowers from secreting nectar.

Such a long, wet season had a beneficial effect in producing a fine stand of vegetation; the flowers were plentiful and marvelously gorgeous. But, as stated, the nectar was lacking, or could it be that the bees were lazy and thought that there would be an abundance of flowers the year through, and that it would be unnecessary to fill their larders with winter stores? I hardly believe so.

THE DRONES TO GO EARLY.

The indications were good for early swarming. Some colonies cast swarms in April and some in May, but by the end of May and early in June I noticed that many colonies began to drive out the drones; in fact, there was a great slaughter of them. I never saw the banishment of the male population of the hives begin before until toward the close of July, or in August. This convinces me, too, that the bees considered the honey season closed early. No honey, no drones; no drones, some winter stores, may be. Perhaps this is bee-logic.

W. A. Pryal.

Alameda Co., Calif., June 19.

Gathering from Sweet Clover

I have 15 colonies of bees and they are doing very well. I have a small field of sweet clover in bloom and my bees gather lots of honey from it.

The American Bee Journal is worth its weight in gold to me.

James Ulrich.

Lebanon Co., Pa., June 26.

Terrible Cyclone in Kansas

On May 8 a most terrible cyclone made its way through our little town, doing an immense damage to life and property. Twenty were killed, 45 families were made homeless, $10,000 worth of damage was done to property, and a score or more who were seriously hurt were taken to the school-house. Aid came from all directions. Kansas City wired us $1000 to-day.

My loss is $1000, but my family escaped from injury, so we are thankful. I lost 22 colonies of bees out of 75. The hives and bees are entirely gone—no trace of them anywhere.

Chas. Norlin.

McPherson Co., Kans., May 15.

Waterleaf—A Honey-Plant

I enclose a specimen of honey-plant quite common here, but have never seen it described or named in any of the bee-papers. It grows on high land, in the edge of forests, and in the old slashings, and yields a light-colored honey of good quality. Coming as it does between dandelion and white clover it is a valuable addition to our honey-plants. Our bees often store quite a surplus from it, and it is rarely a failure.

F. M. Cottrell.

Shawano Co., Wis., June 10.

[The flower is the common waterleaf (Hydrophyllum Virginicum). The name is not a characteristic of the flower, as it does not grow in water. Damp woods and shady places suit it best, but it grows well in more open ground. The pale blue blossoms open slowly and bloom from June to August, thus giving the bees a lengthy harvest time.—C. L. Walton].

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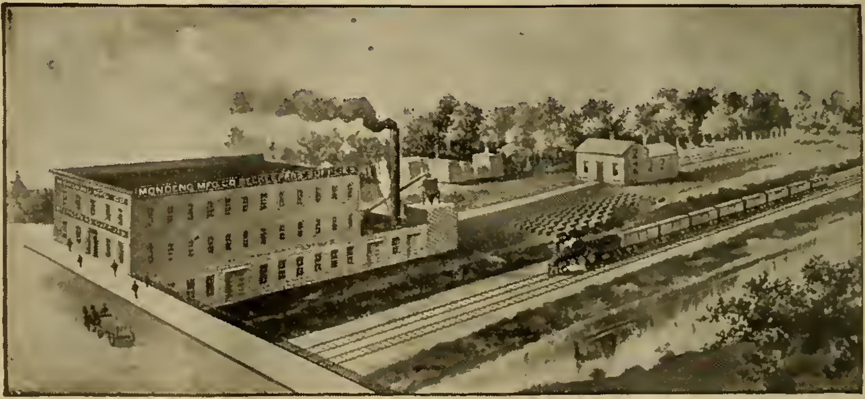
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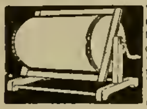

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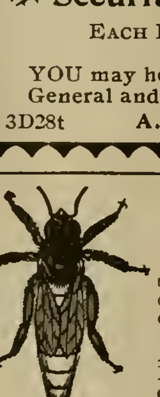

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27A13t **JOHN M. DAVIS, Spring Hill, Tenn.**

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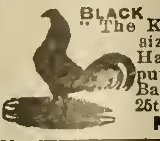

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Working Wax into Foundation for Cash a Specialty.
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OUR HIVES AND SECTIONS
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You Need them NOW— Shipping-Cases

Made with cover all in one piece and in any width up to 13 inches, of the best material obtainable for the purpose, in a factory thoroughly equipped to do the best class of work. On account of our near location to the raw-material district we sell them for less money than you can obtain them elsewhere. Be sure to mention the width desired, and write TO-DAY. All we want is your first trial order. We will naturally get your other trade.

JOHN DOLL & SON,
Power Building, MINNEAPOLIS, MINN.

Do You Need Queens?
By Return Mail?

If so, we can fill your order with the best Queens that money can buy. Try our strain of 3-band Italians; they will not disappoint you with empty supers. Untested Queens, 75 cents; $8 per doz. Tested Queens, $1 each. Send for circular. **J. W. K. SHAW & CO.**
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Please mention Bee Journal when writing.

For Queens SEND TO JOHN W. PHARR Berclair, Tex.

He will furnish at same prices as last year: Tested, $1; Untested. 75c; 5 for $3.25; 10 for $6; 15 for $8.25; 25 for $12.50; 100 for $45. He breeds Goldens, Carniolans and 3-Band Italians. Also 1, 2, and 3 frame Nuclei, and full colonies. Prices given on application. Pharr pays the freight, and guarantees satisfaction on all Queens. To do justice and judgment is more acceptable with the Lord than sacrifice. —(Prov. 3: 21.) 6Atf

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What Adel Bees Do

E. MILTON, MASS., May 27, 1905.
Send me queen same strain as the one sent 1904. That queen proved the best queen I ever received. Her bees filled a super before May 15, 1905. ROBT. FORBES.

All Tested Queens are $1 each.
HENRY ALLEY, Wenham, Mass.

IMPORTED
CARNIOLAN QUEENS!

A limited number of choice imported Carniolan Queens will be disposed of during July and succeeding months. I shall be in Carniola during July making these shipments which will be distributed from Washington, D. C. Price: Select Imported Queen, $4.00. Write for rates for 3 or more. Address, RALPH BENTON,
925 N St., N.W., WASHINGTON, D, C.

Bee Supplies
Guaranteed Superiority!
Lowest Prices

We have been making Bee-Hives, Sections, etc., for over 20 years.

New .. Illustrated .. Catalog free; also sample copy of

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(Monthly, 50 cts. a Year.)

The best magazine for beginners. (It has been published by us regularly for 15 years.)
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THE W. T. FALCONER MFG. CO.,
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Bees, Queens and Nuclei

Choice home-bred and imported stock. All queens reared in full colonies.

One untested queen..... $ .65
One tested queen......... .90
One select tested queen.. 1.10
One breeding queen 1.65
One comb nucleus (no queen).................. 1.00

All grades ready to send by return mail.

Safe arrival guaranteed. For prices on quantities and description of each grade of Queens, send for free price-list. 100 or 200 lbs. of Brood Foundation. Send for sample and prices.
J. L. STRONG.
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When consigning, buying or selling, consult
R. A. BURNETT & CO.,
199 South Water St. Chicago, Ill.

CROP 1905

We have a party wanting the first car of new comb honey. It would probably pay those having such goods to write us.
THOS. C. STANLEY & SON,
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AUGUST BLOODED STOCK

This well-known, reliable stock-paper will discuss Holstein Cattle, their value as milkers, butter makers, cheese makers, beef cattle, etc. Read it. Subscribe now, 25c a year. You can afford 25c.
BLOODED STOCK, Box 221, Oxford, Pa.

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Headquarters for Bee-Supplies
ROOT'S GOODS
At Root's Factory Prices

Queens Now Ready to Supply by Return Mail

Stock which cannot be excelled. Each variety bred in separate apiaries, from selected mothers; have proven their qualities as GREAT HONEY-GATHERERS.

Golden Italians Have no superior, and few equals. Untested, 75c; 6 for $4.00.

Red Clover Queens Which left all records behind in honey-gathering. Untested, 75c; 6 for $4.

Carniolans —They are so highly recommended, being more gentle than all others. Untested, 75c; 6 for $4.00.

C. H. W. WEBER CINCINNATI ...OHIO...
Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

Honey and Beeswax

Chicago. June 19.—The little that sells consists chiefly of extracted and the market is a small one. Comb ranges from 12@12½c for the best white with off grades 1@3c less. Extracted, white, 5½@7c; amber, 5@6c. Beeswax, ready sale at 30c. R. A. Burnett & Co.

Albany, N.Y., June 17.—The honey market here is very dull now. It is between seasons. Receipts and demand very light. Very little old crop carried over, and will be in good shape for new crop, which begins in August Quotations are nominal now. White comb, 12@14c; mixed. 10@12c; dark, 10@11c. Extracted, white, 6@6½c; mixed, 5½@6c; dark, 6@6½c. Beeswax, 28@30c. H. R. Wright.

Kansas City, June 21.—There is very little comb or extracted honey on the market at present, but what there is is being quoted as follows: Fancy white comb, 24 section cases, $2 25 to $2.50; No. 1 white and amber, $1.75 to $2,00. Extracted, per pound, 4½@6c. Beeswax, 25@28c. C. C. Clemons & Co.

Philadelphia, July 15.—As the season advances, there is very little call for comb honey. In fact, no sales, and we make no quotations. Commission men are accepting any offer they can get for what little stock they have on hand. Extracted honey is in some demand. Possibilities of a big crop are holding prospective buyers back. We quote: Fancy white, 7@7½c; amber, 6@7c; dark, 5½@6c. Beeswax in good demand, 29@30c.

We are producers of honey and do not handle on commission. Wm. A. Selser.

Cincinnati, July 10.—We sold to-day at our store new crop of fancy comb honey at 13½c per pound. There is still a big stock of last season's honey on the market, that is going begging at any price. Extracted honey is moving quite lively now. We sell amber in barrels at 5¼@6½c, according to quality. White clover at 7@8½c. Beeswax, 26c. The Fred W. Muth Co.

New York, June 19.—The comb honey market is very quiet and we are hardly justified in making quotations, Some few lots are sold here and there at 13c for fancy, and 10@12c for lower grades, but no large blocks could be moved at these figures. There is still considerable of last year's crop unsold, part of which, no doubt, will have to be carried over until the fall. Extracted honey in fairly good demand. New crop California honey selling at 6½@7c for water-white, 6@6½c for white, and 5@5½c for light amber. Southern at 50@60c per gallon according to quality. Beeswax somewhat declining; choice average stock selling at 29c. Hildreth & Segelken

Cincinnati, O., June 9.—There is no demand for comb honey on account of the warm weather. Extracted is in usual demand for this season of the year. We quote white clover at 7@8c; amber, in barrels, at 5¼@5 c; in cans, 5¾@6c. Beeswax, 28c. C. H. W. Weber.

Denver, June 26.—The demand for both comb and extracted honey is light at present, and there is enough of old stock on hand yet to last until the new crop comes in; the same is selling as follows: No. 1 white comb, per case of 24 sections, $2@$2.20; No. 2. $1.75@$2. White extracted, 6½@7½c per pound. Beeswax, 26c. The Colo. Honey-Producers' Assn.

San Francisco, July 5.—White comb, 1-lb. sections, 11@—cents; amber, 8@10c. Extracted, white, 5½@—cents; light amber, 4@4½c; amber, 3@3½c; dark amber, 2½@—c. Beeswax, good to choice, light, 27@29c; dark, 25@26c.

There has been no wholesale movement in honey this week and no new features have developed.

DOOLITTLE'S

Partner telling his best girl about the fine

Italian Queens

in their apiary. Don't order a queen till you get one of their circulars.

CHOICE BREEDERS
Now being sent out.
DOOLITTLE & CLARK,
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Colorado Honey Producers' Association, Denver.
Fruit Growers' Association, Grand Junction, Robert Halley, Montrose.

ILLINOIS
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ARE THE WHITEST, THE NICEST, THE NEATEST AND THE BEST

G. B. LEWIS CO. Bee-Keepers' Supplies Watertown, Wis.

Prompt Shipments

American Bee Journal

45th Year CHICAGO, ILL., JULY 27, 1905 No. 30

APIARY OF W. D. SOPER, OF JACKSON CO., MICH.
(See page 518)

E. J. BAXTER AND HOME APIARY, OF HANCOCK CO., ILL.

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY

334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec05" on your label shows that it is paid to the end of December, 1904.

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ADVERTISING RATES will be given upon application.

National Bee-Keepers' Association

Objects of the Association

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00

General Manager and Treasurer—
N. E. FRANCE, Platteville, Wis.

☞ If more convenient, Dues may be sent to the publishers of the American Bee Journal.

The Honey-Producers' League

(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

MEMBERSHIP DUES

1. Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.
2. Any honey-dealer, bee-supply dealer, bee-supply manufacturer, bee-paper publisher, or any other firm or individual, may become a member on the annual payment of a fee of $10, increased by one-fifth of one (1) percent of his or its capital, used in the allied interests of bee-keeping.

GEORGE W. YORK, Manager,
334 Dearborn St., CHICAGO, ILL.

Italian Queen-Bee Free as a Premium

To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us ONE NEW subscription with $1.00 for the Bee Journal a year. Now is the time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.

HONEY-JARS.

For a limited time we offer No.25 Honey-Jars, porcelain cover, metal screw cap, holding one pound of honey net, one gross in case complete in 5-gross lots, $4.00 per gross; less quantities, $4.50 per gross, f.o.b. New York. If you want to secure some, let us know at once.

HILDRETH & SEGELKEN,
265 & 267 GREENWICH ST., NEW YORK, N. Y.
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Within a hundred miles of me are over ¾ of the bee-keepers of Michigan. I am on the Pere Marquette R.R., which completely covers this region. Root's Goods, Factory Prices, Prompt Service, Low Freight. Send for Catalog.

GEORGE E. HILTON,
28A12t FREMONT, MICH.
Please mention Bee Journal when writing.

"If Goods are wanted Quick, send to Pouder"

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Root's Goods at Root's Prices

Everything used by Bee-Keepers.
POUDER'S HONEY-JARS. Prompt Service.
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Hoosier Strain Italian Queen-Bees by Return Mail

Untested Queen.......................$ .75
Select Untested Queen 1.00
Tested Queen 1.00
Select Tested Queen.................. 2.00
Select Breeding Queen...............$5.00
Best Imported Queen................. 5.00
Fair Imported Queen................. 3.00

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STANDARD BRED QUEENS.

BUCKEYE STRAIN RED CLOVER, GOLDEN ITALIANS

By Return Mail. Safe Arrival Guaranteed.

PRICES.	ONE	SIX	TWELVE
Untested	$0.75	$4.00	$7.50
Select Untested	1.00	5.00	9.00
Tested	1.50	8.00	15.00
Select Tested	2.00	10.00	18.00

Select Breeders, each $3.00
Two-frame Nucleus and Red Clover Queen 3.00

THE FRED W. MUTH CO.,
No. 51 WALNUT ST., CINCINNATI, OHIO.

LEWIS' SECTIONS,
SHIPPING-CASES.

—AND A FULL LINE OF—

BEE-SUPPLIES BY RETURN FREIGHT OR EXPRESS. SEND TO

H. M. ARND, Manager.

York Honey AND BEE SUPPLY Co.

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(5 short blocks north of the C. & N. W. Ry. Passenger Station, using the Wells St. Cable Line from center of city to Ontario St.)

Long Distance Telephone—North 1559

Catalog and prices on Honey on application. If you want Good Goods at Factory Prices and Prompt Shipment, send your orders, or call on us.

BEESWAX WANTED—28c cash, or 30c when taking Bee-Supplies in exchange —delivered here.

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IT EXCELS.

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WE GUARANTEE SATISFACTION.

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BEE-SUPPLIES

OF ALL KINDS.

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Beeswax Wanted at all Times.

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DADANT & SONS, Hamilton, Ill.

Millions of Sections
Shipping-Cases TONS of COMB FOUNDATION

Abundance of Bee-Smokers, Bee-Veils, Bee-Escapes, Bee-Hives, etc. Everything the bee-keeper needs. The best goods made. **Lewis' Goods in Indianapolis at Factory Prices. Orders received in the morning shipped same day. FINE ITALIAN QUEENS** mailed promptly from our breeder, here in the city. Untested, 75c; Select Untested, $1.00; Tested, $1.00; Select Tested, $2.00.

C. M. SCOTT & CO. 1004 EAST WASH. STREET
INDIANAPOLIS, IND.

N.B.—A Porter Bee-Escape, or its equivalent, FREE with first order, if you say where you saw this ad.

Please mention Bee Journal when writing.

WE SELL ROOT'S GOODS IN MICHIGAN
Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. **Beeswax Wanted for Cash.**

M. H. HUNT & SON,
BELL BRANCH, WAYNE CO., MICH

Please mention Bee Journal when writing.

VIRGINIA QUEENS Italian Queens secured by a cross, and years of careful selection from red-clover queens and superior stock obtained from W. Z. Hutchinson. Untested queens, 75c; after June 15, 60c; tested queens, $1.00; after June 15, 75c; selected tested queens, $1 25; after June 15, $1.00. Write postal card for circular. **CHAS. KOEPPEN,**
17A26t FREDERICKSBURG, VA.

Bee - Supplies !

We carry a large stock and greatest variety of everything needed in the Apiary, assuring best goods at lowest prices, and prompt shipments. We want every bee-keeper to have our **Free Illustrated Catalog**, and read description of Alternating Hives, Massie Hives, etc. **Write at once for Catalog**, either English or German language.

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Shugart & Ouren, Council Bluffs, Iowa.
Fulton & Ford, Garden City, Kansas.
I. H. Myers, Lamar, Colo.
Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex.

FINE QUEENS

By Return Mail. From my 3 and 5 banded long-tongued Italians. Tested, $1; warranted tested, 75c; untested, 60c; no disease. I guarantee all Queens perfect, to arrive safely, and to give reasonable satisfaction. I have pleased others and can please you. May I ask for a trial order?

CHAS. M. DARROW
23Atf R. F.D. No. 1. MILO, MO.

QUEENS

◆

We have secured the services of one of the best Queen specialists in the U. S. Over 20 years' experience rearing Queens. Our Yard is stocked with select breeders from the best yards in America, and can send Queens by return mail.

◆

Prices to Sept. 1, 1905:

Untested Queens .... $ .75
Select Untested Queens 1.00
Tested Queens 1.50
Select Tested Queens 2.50

GRIGGS BROS.
521 Monroe Street,
TOLEDO, - OHIO.

IN SEASON

Sections

We have a larger stock of sections than we ever had at this season, and are prepared to make prompt shipment of sections, foundation, and most other goods. There has been very little delay in orders all season except in a few cases where something special has held some orders longer than usual. Our agents generally are also in a position to make prompt shipment. If the bees get lots of honey, and you need more goods quickly, remember we are in a position to furnish them by first train.

◆

"I desire to thank you for being so prompt in sending the sections I ordered from you. They came in less time than it takes to tell it." L. G. Reed.

Kent, Ohio, July 10, '05.

◆

Special Price on Tin Cans

We recently secured a special bargain in half-gallon square cans. They are choice bright stock; but as the pattern differed slightly from the regular one they are now making, they closed them out at a special price. We have also an overstock of quart oblong square cans. While this stock lasts we will make the following prices for shipment from Medina only:

¼-gal. oblong square cans with 1½-inch screw, $5.00 per 100; $45 00 per 1000.

⅙-gal. square cans with 1-inch screws, $6 00 per 100.
½-gal. " " 1¼-in. " 6 50 "
½-gal. " " 1½-in. " 7.00 "
In 500 lots, 50 cts. per 100 less.

We have also a good stock of one and five gallon cans at regular prices.

◆

Glass Honey-Packages

Anticipating a demand for honey jars and bottles we have put in two car-loads of stock before the summer shut-down of the glass-factories, so that we are prepared to furnish the various jars listed in our catalog. We have also a few odds and ends of stock, such as we formerly listed, which we offer, to close out, as follows. We can not duplicate these when present stock is sold:

1-lb. tin-top tumblers, No. 789, 5 bbls. of 200 each, at $4.50 per bbl.

1½-lb. tin-top glass pails, No. 778, 2 bbls. of 100 each, at $5.00 per bbl.

Large lb. tin-top glass pail, No. 777, 1 bbl. of 150, $5 00.

Small lb. tin-top glass pail, No. 776. 1 bbl. of 200, $5 50.

1-lb. Oaken Bucket tin top, with wire bail, 1 bbl. of 150 for $5.00.

These prices are all a dollar less than we used to sell these tumblers and pails at. We have also a little loose stock which we will pack and include at same rate.

Wide-Mouth Mason Fruit-Jars

The car-load price on Mason fruit-jars is over a dollar a gross higher this year than last. We carried over quite a large stock, which we will sell at the same prices as heretofore—namely:

Pint	doz., 52 cts.;	6 doz., $3.00;	12 doz., $5 75
Quart	" 55 cts.;	" 3.10;	" 6 00
Half-gallon	" 75 cts.;	" 4.10;	" 8 00

Triumph wrench, 15 cts. each.

Ball's waxed rings, 5 cts. per dozen. These are far superior to rubber rings for fruit-jars, and cheaper.

In addition to the regular style of Mason jars we have a stock of wide-mouth special Masons, with 3-inch opening. These are especially desirable for canning large fruit whole, or for packing chunk comb honey. These jars are of extra quality, and cost $1.65 per gross more than the regular pattern. As we do not list them, we offer our present stock at an advance of 10 cts. per dozen, $1 20 per gross, on any size. They have zinc caps and rubber rings. We have no wax rings of the right size to fit these jars. They are a bargain at this price.

◆

Caucasian Queens

We can spare a limited number of imported Caucasian queens, received direct from the best breeders in Caucasus. Prices as follows:

Extra select Caucasian imported queens	$15 00
Select Caucasian imported queen	10 00
Extra select untested Caucasian-Italian queens, from Caucasian mothers mated with Italian drones	3 00
Select do	2 00

Orders filled in rotatation. Delivery begins about July 15.

◆

"How to Keep Bees"

A charmingly written manual describing clearly, and in detail, the outfit, first steps, and methods. The author's well-known literary ability has combined with her enthusiasm for the subject to produce a very unusual volume.

Finally, with all due deference to the authors of excellent books on bee culture which we have already, my opinion is that this new book, "How to Keep Bees," is the best one for a beginner, or one who does not wish or expect to keep more than a dozen colonies, that has yet come before the world.—A. I. Root, in Gleanings, July 1.

Price, $1.00. Postage 10 cts. extra.

◆

Gleanings' Contests

Second-Prize Photo.—Very liberal awards for best photos of apiary and other bee-keeping objects of interest. Full particulars on application.

Fair Contest.—Gleanings offers prizes of $10, $5, $3 and $2 for the largest list of subscribers taken by agents during Fairs throughout the country this fall. Here's a chance to make money on regular commissions and prizes. Write for entry blank and particulars.

Complete Catalog by Return Mail.

The A. I. Root Company

MEDINA, OHIO

BRANCHES: Chicago, 144 E. Erie St. Philadelphia, 10 Vine St. New York, 44 Vesey St.

Established in 1861

THE AMERICAN BEE JOURNAL

Oldest Bee-Paper in America

(Entered at the Post-Office at Chicago as Second-Class Mail-Matter)

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor | CHICAGO, ILL., JULY 27, 1905 | Vol. XLV—No. 30

Editorial Notes and Comments

Help Blow the "Honey-Horn"

Editor E. T. Abbott, of the Modern Farmer and Busy Bee, comments thus suggestively on the short article we had published in the Chicago Daily News:

> George W. York, editor of the American Bee Journal, and Manager of The Honey-Producers' League, has an interesting article in the Chicago News on the importance of honey as a food and the folly of thinking that comb honey is manufactured. Such articles in a great city like Chicago must result in a world of good to the bee-keeping fraternity, and we hope the time may come when this subject will be discussed in all the large dailies of the land, as well as the country weeklies. The way to make a market for honey is to talk about honey, write about honey, and show people what honey really is, and what a healthy, delicious food it is for the human family. In other words, the way to boom your business is to blow your own horn, and get as many more people as possible to help you. The oftener the thing is repeated in print the sooner it will attract the attention of the public, and the sooner they will be ready to test the merits of the claims made in the articles written.

By the way, for a two-cent stamp we will mail a copy of the short article that appeared in the Chicago Daily News to any of our readers who may be able to get their local editors to publish it. We have it printed in typewriter type, on one side of the paper—just the nicest kind of "copy" for an editor to hand right to his printer. If it could be published in every newspaper in the land it would help both consumers and producers of honey. Not because we wrote it, but because it contains the truth about honey that should be read by everybody.

Prevention of Swarming by Inversion

This is revived, after quietly slumbering for some years, by an article in the American Bee-Keeper from E. H. Dewey. He turned the combs of a hive upside down, and a week later he found that the bees had destroyed the cells that were started. Other cells, however, had been started, and these in their turn were a week later found destroyed as a result of inversion. This weekly inversion wa practiced upon 4 hives successfully. But the same success was obtained by others years ago, only to be followed by failures on further trial. This is mentioned so that no one may risk too much upon a plan that would be a boon to bee-keepers if it could always be depended upon.

Ventilation of Hives in Cellars

At the Ontario convention, reported in the Canadian Bee Journal, discussion brought out a number of expressions to the effect that cushions were not of any special advantage in cellars, bees doing as well with sealed covers, only so there was large enough opening for change of air *somewhere*. The statement was also made that experiment had shown that colonies in hives placed close to the cellar-bottom did apparently as well as those higher up.

Apis Dorsata to Be Investigated

A few years ago there was some talk about introducing into this country the giant bee of the far East, and fears were expressed that if introduced it might prove among bees what the English sparrow has proved to be among birds—an intolerable nuisance. There is little doubt that before Prof. Benton returns again to his native land we shall know something definite in the matter. Instead, however, of shipping these bees direct to this country, Prof. Benton proposes the very sensible plan of bringing them under test and observation on "their native heath" before making any shipments, and if such testing proves it advisable they can be shipped to California across the Pacific.

One of the points, no doubt, to be first settled, will be the mooted one as to whether these bees can be kept in hives, or whether they have the migratory habit so fully developed that they will desert their place of abode periodically so as to interfere entirely with their domestication. Northern bee-keepers, at least, need hardly have any anxiety on the score of similarity to the sparrow business, for it is not likely that they would survive a northern winter if they should attempt to occupy the land by spreading themselves about promiscuously on trees as they do in their present home. If, however, they can not be persuaded to stay hived in their native habitat, it is hardly worth while to take any further trouble about them. But many a thing that appears impossible proves possible if persevered in, and it's well worth while to know positively about those big bees.

White and Yellow Sweet Clover

J. A. Green, of Colorado, says in Gleanings in Bee Culture, that both this year and last the yellow sweet clover bloomed 15 days in advance of the white, and he thinks an increase in the amount of yellow sweet clover would be a good thing for bee-keepers in that region. There would not, however, be the same advantage in yellow sweet clover in regions where white clover is the leading honey-plant. It would then come in direct competition with white clover, while the white sweet clover would give an additional amount of surplus, because, on account of its lateness, it continues to bloom after white clover is gone.

Water for Bees

As the honey harvest begins to wane, the trouble of bees about pumps, watering-troughs, etc., will begin or increase. The great point is to get the bees *started* at the watering-place you provide for them before they get in the habit of going where you don't want them. If nothing else, provide a big crock with a few sticks of fire-wood in it and fill with water, and then see that it is never dry.

Combs and Sections in Same Super

Speaking of this, which has been given as the Townsend plan, the editor of the American Bee-Keeper says:

> "This method is so old that we supposed it was universally known. Mr. Samuel Cushman (then of Pawtucket, R. I.) and the writer, began using it about 1885, and the writer has used it ever since, having hives and supers specially made to facilitate such practice. It has been mentioned by many writers, if memory serves us correctly."

An Appreciation from England

The following editorial paragraphs, taken from the British Bee Journal for June 22, and which we are pleased to reproduce here, are very appreciative of Mr. Frank Benton and his long journey after bees and honey-plants across the ocean:

> We have been favored with a call and a pleasant interview with Mr. Frank Benton, Apicultural Investigator, United States Department of Agriculture, who, in his official capacity, has undertaken a journey extending more than half around the world in search of foreign bees and honey-producing plants. It came as an agreeable change from our ordinary editorial work to spend a few hours with so fully-informed and widely-traveled a bee-specialist as our visitor. Few men have had such a long and varied practical experience with foreign bees in their own habitats as Mr. Benton, who seems eminently fitted for the task entrusted to him. Fully impressed with the importance of his mission, he was frank and willing to a degree in conveying to us—and through us to our readers—what his journey really meant, and this will be realized when we say that, after a very few days' stay in England, he goes through France, Germany, Switzerland, Italy, Austria, and to Turkey; then leaves Constantinople for the Caucasus, thence across the Caspian Sea and by rail on to Bokhara, and, if possible, through Afghanistan by caravan to Punjaub, in India, and finally from Calcutta to the Philippine Islands.
>
> The specific object of his errand is, among other things, to obtain a good supply of Caucasian queens of a particular strain, which has been tried in the experimental apiary of the Government apiary at Washington by Mr. Benton himself with gratifying results. He also hopes to be able to do something towards deciding the usefulness, or otherwise, of the giant bees of India, *Apis dorsata*, and other species of this genera, known as *Megapis dorsata*, *M. zonata*, etc.
>
> With all this before him, we heartily wish for Mr. Benton's success, and if the desired object is secured, as we trust it will be, British bee-keepers will no doubt, in some degree at least, benefit from his labors, because, should the particular strain of Caucasian bees mentioned maintain the extremely docile and prolific character of those already tried at Washington, we shall hope to see them introduced into this country for the general good of the craft. In any case, we shall hope to hear from our good friend occasionally as time passes, and that he may return safely from his journey will be the wish of all readers along with ourselves.

Miscellaneous News Items

Crop Reports and Prospects.—The California National Honey-Producers' Association sent a notice to its members July 6, signed by Secretary H. J. Mercer, from which we take the following information as to crop reports and prospects:

> Southern California will have about ⅛ of a crop.
>
> Central California, "prospects are for a fair crop."
>
> The Colorado crop will be about 60 percent of a full crop. Worms are destroying honey-plants. Eastern slope cold and windy.
>
> The Arizona honey crop to date is the lightest in many years.
>
> In Texas a fair crop is expected.
>
> They estimate the crop for Southern California to be 125 cars of 20 tons each. This estimate is not a guess, but is based on reports received and the number of cases and cans sold.

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A Visit to Mr. E. J. Baxter.—The morning of the second day we were at the Dadants', Mr. D. hitched up a good horse to the carriage, and gave us an 11-mile ride along the east shore of the Father of Waters. It was a somewhat exciting drive, as nearly all the bridges along the road had been washed away during the recent unprecedented flood, so that we were compelled to ford streams often up to the box of the carriage. In one township 27 bridges were reported as having been thus swept away. But much of the way was very pleasant, as it was in the shade, and also early morning.

About a mile north of Hamilton the sweet clover is simply wonderful in its luxuriant growth along the roadsides. Mr. Dadant said it was right there where his father, some 40 years ago, first recognized melilot, or sweet clover, in this country. He had been familiar with it as a good honey-plant in his native France. So he began at once to gather the seed and scatter it until all over that region it grows in rich abundance, and is a source of much nectar for the bees.

We arrived at Mr. Baxter's about 11 a.m. He was just getting barrels ready for the first extracting of the season. Besides a home apiary of about 100 colonies, he has several out-apiaries, in all some 250 colonies of bees. And he seldom has a failure in the honey crop. Like his brother-in-law, Mr. Dadant, Mr. Baxter believes in large hives, and runs for extracted honey exclusively, following the Dadant methods of management which are invariably successful.

Mr. Baxter has always made money at bee-keeping, his annual honey crop running up into the tons. He is a director in the State Bank of Nauvoo, which is one of the most prosperous institutions of the kind in all Illinois. Its capital is $25,000, with a surplus fund of $50,000. Its deposits of all kinds amount to nearly half a million dollars.

Nauvoo is a city of perhaps 2,000 population. It was founded by the Mormons who were compelled to leave it in 1847, going on to Salt Lake City. A few of the small brick houses built by the Mormons are still in use at Nauvoo. Some of the larger buildings were constructed out of the stone from the Mormon Tabernacle, which was taken down after they left Nauvoo.

But to return to Mr. Baxter. He has two sons and two daughters, the elder of the latter being a musician. Both sons are at the State University, as is also Maurice Dadant, mentioned last week.

Like Mr. Dadant, Mr. Baxter is just completing a brick mansion. It is a result of his bee-keeping—a substantial proof that he has succeeded. It is located at the side of the home apiary. (See first page). The picture of the apiary was taken before the house was built. It would be utterly impossible to get a good picture of it now, as it is located under so many large trees, some of which are basswoods. And how the bees were humming on the just-opening blossoms! It seemed we never saw much finer basswood trees than those in Mr. Baxter's apiary.

As the white clover had been yielding for a week or two, on some hives there were 3 and 4 10-frame extracting-supers. Each had 9 frames, so there would be thick combs, thus requiring less work in uncapping.

Mr. Baxter seldom has any swarms. This condition would be expected as he uses hives and methods similar to the Dadants, as before mentioned.

Mr. B. has been a reader of the American Bee Journal for over 20 years.

Both Mr. Baxter and the Dadants are large growers of grapes, and have clearly proven that grapes and bees may be kept within close proximity to each other without one doing damage to the other. The Dadants were induced to plant grape-vines on a large scale in order to convince their neighbors that bees did not, and could not, damage sound grapes. Mr. Baxter has one of the largest vineyards in the country, and the Dadants have about 12 acres of vines, and grow as fine grapes as anybody, in spite of near-by apiaries. Nauvoo is noted for its vineyards.

Immediately after dinner Mr. Dadant drove us around the city of Nauvoo, then we started on the homeward trip by another route. The day's 22-mile ride afforded a good chance to visit with Mr. Dadant. And we improved the time.

We arrived just in time to partake of Mrs. Dadant's splendid supper, after which it was necessary for us to start for Keokuk to take the train for Fort Madison, and then back to Chicago again. It was a pleasant 2-day's trip—one that we will not soon forget.

◆

The Apiary and Residence of W. D. Soper, of Jackson Co., Mich., appear on the front page. On July 3 there were 75 colonies of bees in the apiary, all booming, and part had 3 stories on, each 12 inches deep. It is Mr. Soper's farm residence, as the large grain-barn can be seen in the distance at the right. It is located 4 miles north of Jackson, on the Lansing road. Mr. Soper is also a dealer in bee-supplies, and is a general all-around hustler. We had the pleasure of meeting him at the Michigan State Convention, held at Grand Rapids, last February.

◆

Walter S. Hoss, a new queen advertiser, located at Indianapolis, Ind., is sending out some very fine Italian queens. We think a trial order will convince any one that he has nice bees. See his advertisement on another page.

◆

Mr. and Mrs. E. E. Coveyou, of Emmet Co., Mich., are rejoicing over the arrival of a fine baby boy, born July 13. They intend to make him the "Bee-King of the North." We hope they will succeed in so doing.

"Unite," Not "Winter"

The word "winter" in first line of the last paragraph of my article on pages 452 and 453 should be "unite." I was writing solely with reference to the uniting of weak colonies in spring, and not about wintering at all. Whose was the mistake I am unable to say.

The season here so far has been a fairly good one for honey. The weather is very wet at present. I have had but 4 swarms. Cause, an abundance of storage-room in the shape of drawn combs. EDWIN BEVINS.

Decatur Co., Iowa, July 3.

Convention Proceedings

Report of the Chicago-Northwestern Bee-Keepers' Convention, held at Chicago, Ill., Nov. 30 and Dec. 1, 1904

(Continued from page 490.)

ADVANTAGES OF THE "WISCONSIN HIVE."

"What are the advantages of the so-called Wisconsin hive?"

Mr. Bacon—It seems to me that the Wisconsin hive has the combination of the good points of the Improved Langstroth-Simplicity and also the dove-tailed; it seems to me that is the main reason for its popularity. It has a portico front and it is now made so that the supers which are now used with the dove-tailed hive can also be used on the Wisconsin hive. Those I believe are the principal points.

Mr. Abbott—I want to say that the main advantage of the Wisconsin hive is that its makers took all they could of the "St. Joe" hive and put into the Wisconsin, and made a very good hive! [Laughter.]

Mr. Fluegge—I would like to ask these gentlemen what the slatting arrangement in their super is. If they got that from Mr. Abbott he didn't lose much. [Laughter.] I have several of them and I always took an axe to them to get the honey out. They may have improved them now. I hope they have. When I was a beginner I had six of them and the slats had no end-blocks; they fitted into a rabbet at the bottom of the super, and in order to get them out—one rabbet was a little deeper than the other—I had to lift them up a little ways and shove them over probably a quarter of an inch, and the other end would come out.

Mr. Wilcox—I have tried the Wisconsin hive somewhat. I bought one or two some years ago for trial and I found some disadvantages. The question calls for advantages.

Pres. York—We don't want to know the disadvantages—just the advantages!

Mr. Wilcox—One thing I disliked was that the end-bars of the brood-frames stuck right out.

Mr. Root—That is the Langstroth-Simplicity.

Mr. Wilcox—I think it was listed as the Wisconsin hive. I might specify another peculiarity of it which was that the frames were anywhere from one quarter to three-eighths of an inch shorter than the regular Langstroth or what would be the old frame Langstroth length and that was an odd feature of it because it didn't correspond with any other frames in the neighborhood. Another feature of it was that described by the last gentleman about the supers. The slats in the bottom of the super didn't trouble me very much but I didn't exactly like them. I may be mistaken. I don't know. But I have always called it the Wisconsin hive. I think it was.

Mr. Whitney—I want to back up what Mr. Wilcox said about what he supposed to be the Wisconsin hive. You know last winter didn't treat some of us very well, and we lost a good many bees. I wanted some last spring to build up my apiary, and I went out and bought four or five colonies. They happened to be in a queer sort of hive; the frames were a little shorter than the Langstroth; I couldn't use them in the Langstroth hive when I came to make a transfer; and they had supers on that had that rabbet arrangement that the gentleman here speaks about. I thought it was a Chinese puzzle. I couldn't use it at all. Now, I don't know whether that is the Wisconsin hive or not, but as they describe it I should conclude it might be. It had a portico.

Mr. Abbott—I want these gentlemen to get a clear idea about these hives, and it is a matter of some interest. While I represent the firm making the Wisconsin hive, I think an explanation is due them at least. They have made what was called the Langstroth-Simplicity hive which is, I admit, practically worthless. They have discussed taking it off the market for a long time. It has a shorter frame, and a groove all around, and the frames extend over. A great many people call that the Wisconsin hive. That is not the Wisconsin hive at all. That is a Langstroth-Simplicity hive. They make at the same time what they call a Wisconsin hive, that is the trade name; that has Hoffman frames in it which fit inside the hive on a tin rabbet. The sliding arrangement of the hive is the same as the St. Joe hive, and if the gentlemen do not know how to handle that, why, we are ready to show them how to handle it so that they won't have any trouble about it. But don't get the two hives confused. The old Langstroth-Simplicity hive, in my opinion, is worthless because it hadn't a correct bee-space above it and the frames were not the same. So when you order hives don't say you want a Langstroth-Simplicity hive unless you want an odd frame, for you will get it. The other is the same as the dove-tailed hive; and in all of the hives that concern makes, the frames are the same except that old Langstroth-Simplicity, and that is not of any account.

Mr. Whitney—When you order hives don't order the Whitney hive. He has a hive of his own, and he doesn't want any better, and he has none to sell!

Mr. Stuebing—It depends mostly on the man, how he handles the bees and how he places and handles the frames.

(Concluded next week.)

Report of the North Texas Convention

The North Texas Bee-Keepers' Association met at Blossom, Tex., and was called to order by the President, J. M. Hagood, at 1 p.m., April 5, 1905, the morning having been taken up in a general social time. In the absence of the chaplain, prayer was offered by W. H. White. The secretary being absent, Mr. White was elected temporary secretary.

The first business was the appointment of a committee on program, as follows: E. A. Ribble, Dr. R. P. Davies, J. R. Scott, and E. W. Cothran. While the committee was out, the members were enrolled and membership fees taken up.

The Program Committee then reported the following, and was discharged:

1. Spring Management of Bees in North Texas.
2. Best Method of Increase.
3. Best Method of Suppressing Increase.
4. The Best Bee for North Texas.
5. Honey-Producing Plants of North Texas.
6. The Best Frame for North Texas Bee-Keepers.
7. Which is the More Profitable, Bulk Comb Honey or Section Honey?

The Program Committee suggested that a committee be appointed to select special subjects for discussion at the next annual convention, and certain members be assigned the special subjects.

The program was then taken up as follows:

SPRING MANAGEMENT.

Spring management of bees, as given by E. A. Ribble, is to see to it that all colonies are supplied with plenty of stores to carry them through to the first honey-flow, either by feeding them syrup or giving them honey kept over for that purpose. He keeps honey that is not in good marketable shape for spring feeding. His unfinished sections are used for this purpose by filling a super and setting it over the colony needing feeding. Thus he tides them over the dearth which usually comes in North Texas from May 15 to July 1.

Dr. Davies advocates feeding enough to keep colonies strong in bees and in good working condition for the honey-flow.

Mr. Hagood gave his plan of taking the combs out very early and then giving them back as they need the stores.

Mr. Scott prefers using the Doolittle feeder, and feeding as much as they need.

GETTING AND SUPPRESSING INCREASE.

Dr. Davies prefers natural swarming.

Mr. Cothran increases by dividing.

The best method of suppressing increase, as given by Mr. Ribble, is to run for extracted honey. Mr. Hagood prefers large hives for the purpose.

BEST BEE AND HONEY-PLANTS FOR NORTH TEXAS.

Mr. Ribble thinks the leather-colored Italian bees are the best.

R. C. Abernathy prefers dark Italian bees.

As to the best honey-plants for North Texas, Mr. Hagood thinks alfalfa is good; also cotton always produces more or less honey every season. Huckleberry and sumac were spoken of as being good by those who live in the timber part of the country.

BULK COMB VS. SECTION HONEY.

As to which is the more profitable, bulk comb or section honey, Mr. Hagood says section honey.

Mr. Abernathy, bulk honey, every time, having produced last season 18,000 pounds from 280 colonies of bees, and sold the entire crop for 10 cents a pound. After disposing of his crop he had orders for 16,000 pounds more.

Dr. Davies prefers section honey. Messrs. Ribble, White and Scott also prefer section honey.

Quite a discussion took place on this subject, and much good was derived therefrom.

On motion the convention adjourned to meet at 8 o'clock the next morning.

SECOND DAY.

The convention met promptly at 8 o'clock, and resumed work as laid down in the program.

A committee to draft a program for the next meeting was appointed as follows: E. A. Ribble, J. H. Barnes, Dr. R. P. Davies and W. H. White.

The election of officers for the ensuing year resulted thus; J. M. Hagood re-elected President; R. C. Abernathy, Vice-President; and W. H. White, Secretary.

A vote of thanks was tendered the people of Blossom for the cordial manner in which they entertained the members of the convention.

A motion was carried to tax the members 25 cents each as annual dues for the purpose of keeping up the stationery and other expenses that may occur.

Blossom was selected for the next place of meeting.

The convention adjourned until the first Wednesday and Thursday in April, 1906. W. H. WHITE, *Sec.*

Contributed Special Articles

Management of Bees for August

BY C. P. DADANT

THE second honey crop begins usually about the middle of this month wherever fall blossoms abound. It begins with the knotweed, and the ironweed, and ends with the Spanish-needles and the asters, in September. Sometimes the white clover lasts through the entire summer, and furnishes quite a little honey during August, especially if the summer has been moist. It is therefore necessary to give the hives additional space unless the supers have been removed and replaced by fresh ones. It is in fact not very good management to leave the supers on all through the summer, because the bees will put a great deal of propolis in the sections. It is better to remove them as soon as the clover crop is at an end, to put them on again as soon as the fall crop begins, except when the honey season is uninterrupted.

This applies especially to the production of comb honey. With the extracting supers it matters but little whether the bees put propolis in them, and they are safer over the brood-combs than stored away in the bee-house.

Just as soon as the bees are noticed whitening their combs, they should be given ample room. New swarms that have filled the lower story during the clover harvest are often known to fill supers during the second crop, so they must be supplied with supers. Sometimes, also, colonies that have swarmed and have become greatly weakened begin to recuperate and may prove among the best for the second crop.

It is well also to examine all the colonies for laying queens. After the swarming season is over some queens get lost in the field while out to mate, and the colonies to which they belong may not have had suitable brood at hand to replace their loss. So we often find, late in July or early in August, strong colonies dwindling down because of being queenless. It was formerly customary among the practical bee-keepers to rear a number of queens and to keep them in nuclei for such emergencies, but the queen-business has gone into the hands of specialists, and the price of a queen is now so low that it is hardly worth while to bother with queen-rearing. Most of our producers order their queens from well-known breeders at a less price than it would cost them to rear them.

But if we do not wish to buy our queens, a good way to replace the loss of a queen is to supply the colony with a sheet of brood in all stages (especially young brood), with the adhering bees, from the best colony in the yard. A queenless colony helped in time will still rear a queen and gather enough honey for winter.

But we must bear in mind, at the August crop, that the condition of the colonies is changed since the swarming season has passed. Some colonies that were strong in June may be weak in August, and *vice versa*, so each hive must be examined just as at the beginning of the harvest, and either given more space or reduced according to its requirements.

If the colonies have been given extra ventilation during the hot weather by raising the hives from the bottom-boards, it will be well to lower them down again by the end of the month, as cool nights are coming and there will be loss of heat if too much space is left.

New colonies made by dividing on old combs should be reduced to the amount of space they can readily cover. In this way they will put their honey in more compact shape for winter, and will also protect themselves best against the moth. For it is at this season that the moths are most numerous. Strong colonies have nothing to fear from them, and every colony may be regarded as sufficiently strong if it does not have more combs than the bees can cover, and if it has a good laying queen. Hancock Co., Ill.

Is Old Foundation as Good as New?

BY J. A. GREEN

THE article by G. M. Doolittle, on page 54, would seem to the inexperienced to be a "settler" on the question of the comparative value of old and new foundation; yet, to my mind, it is as good an example as one could wish to find of the desirability of really proving a thing instead of either taking the word of some one else or accepting as conclusive the results of incomplete experiments.

The question of the comparative value of old and new foundation can not be settled entirely by the bee-keeper. In a matter like this, we should ask the bees. But, you will say, this is what has been done.

Doolittle and other bee-keepers have used old foundation, and have found that the bees used it all right. Does not that prove that old foundation is as good as new? By no means.

Take notice that Doolittle says that *all* the foundation used by him for 15 years has been put into the frames or sections during the months of December, January, February and March, then stored away until used. Will he tell us what he has had to compare this foundation with? All that his practice really proves is that bees will use old foundation, something that I think no one will question. But it would give scarcely a hint as to what was the preference of the bees.

Now let me tell you how I have tested this matter, in what I consider the only fair and convincing way. Although I fully believe that new foundation is best, and though I much dislike to have any sections filled with foundation carried over from one season to the next, I am obliged by the necessities of my position to anticipate the bees' needs, and consequently the close of the season usually finds me with quite a number of supers filled ready for the bees, but unused. These, Doolittle tells us, are just as good for use the next season as if they were filled with fresh foundation just before the honey-flow. Accordingly, no doubt, he would use them just as they are, and consider himself lucky in having them all ready for the bees.

Experience has made me a little cautious about this, though, and I never give a colony a full super of old sections. Instead, I divide the super, putting half the old sections into another super and then filling both with sections containing foundation as fresh as I can conveniently get it. They are always put in in a certain way, the new sections all on one side of the super, the old on the other, and I can always tell at any time not only which supers are prepared this way, but can always tell which of them are the old and which are the new sections. I have done this for many years, having each season from 20 to 100 supers prepared in this way. Now, as to results:

In nearly every case, except when the bees have been crowded into the supers by a heavy flow of honey, the bees will start on the new sections first. Occasionally they will make quite a start on them before they will touch the old ones, but usually, in an ordinarily good honey-flow, there will be only a little difference, just enough to show that they prefer the fresh foundation. Even this little difference will usually disappear before the super is finished, so unless you keep close watch of the work being done, you will not notice that the bees have any preference.

Perhaps you will say, if the difference is so slight that it can not be detected at the time the super comes to be finished, it does not amount to anything. It does amount to something, though, in just this way:

It is so exceedingly important that the bees make an early start in the supers; that they form as early as possible the habit of storing their honey there; that for the first super at least everything should be made as attractive as possible.

The man who has a large apiary must have his sections prepared in advance of the time they are needed, but if you have not many bees do not be in too great a hurry to get the sections filled. When they are ready for the bees, keep them closed up as tightly as possible, away from the air, and especially the light. The action of the light and air is to bleach and harden wax. In the early days of comb foundation, bleached wax was used for surplus foundation until it was found that it was not as good as the softer yellow wax. Foundation that is left closely packed, as it comes from the factory, will deteriorate but very little.

That there is a difference in quality between fresh foundation and that which has been exposed to the air is proved by the fact that the paper separating the sheets of foundation is often marked by an oily stain where it comes in contact with the wax, while foundation that has been exposed to the air for any length of time can not be made to stain paper by contact.

No, Mr. Doolittle, this matter of old foundation not being as good as new, will not down. It will keep on its rounds through the papers and on mortal lips, bobbing up its head again and again until nearly all the bee-keeping world not only thinks but *knows* it to be a fact.

The foregoing applies to foundation that has never been put into the hives. If the foundation has been left in the hive some time, so that it has been propolized by the bees, the case is even stronger. I have frequently seen or heard the statement in regard to putting sections on late in the fall, that they were all the better for having been worked over a little by the bees, even if they had not been drawn out any. No greater mistake was ever made.

When foundation is left on the hive at a time when the bees are not inclined to draw it out, they are liable to cover it with a varnish of propolis, after which they are very loath to do anything with it. I have known such sections to go through two good honey seasons untouched, though several sets of other sections in the same super were promptly filled and finished. The most profitable thing to do with foundation in sections that the bees have begun to propolize is to cut it out and melt it up.

Mesa Co., Colo.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

A Bereaved Sister—Motherwort

A few weeks ago I sent you a copy of the Crawford County Press, containing an account of the death of my husband, and forgot to mark it with my honey stamp, so that you would know that a bee-keeper had sent it.

In the care of my husband all winter and his recent death I had almost forgotten that I was a bee-keeper. After a very severe winter and long, cold spring I found on June 1 that I had lost 50 percent of my bees, and some of those that were left were in a very poor condition, but they are building up now. The weather, and especially at night, is very cool; to-day we are having a heavy rain. I have taken off no honey to date (June 29).

LATER.—To-day (July 5) I took off my first super of honey. It is very nice, but we need a little sunshine. It has been pleasant to-day, but I think it will rain before morning. Basswood trees are budded and almost ready to blossom. I hope for some honey from that source. There is an abundance of white clover, but there is a little too much rain for the bees, as we have a shower almost every afternoon.

What is the name of the enclosed plant? It begins to blossom in June and continues to blossom till frost comes, and the bees work on it incessantly.

I am all alone with my bees now, and feel too sad and lonely to write. I wish you a pleasant and prosperous summer.

MRS. PAUL BARRETTE.

Crawford Co., Wis.

Yes, I received the notice of your husband's death, and was considerably puzzled over it. Your letter makes all plain. I am sure the sisters will all join with me in extending our heartfelt sympathy in your affliction. That sentence, "I am all alone with my bees now, and feel too sad and lonely to write," made me feel that I would like in some way to let you know that the sisters *do care*, and feel, oh, so sorry for you.

I think the enclosed plant is motherwort, one of the mint family.

◆

Artificial Increase—Putting on a Second Super

1. In artificial swarming do you recommend forming one or two colonies from the original one? A bee-keeper tells me his bees gather little or no surplus honey if only one new colony is formed.

2. Will you kindly explain how the second super of a Langstroth-Simplicity hive is fitted on the first? Regular size 4¼x4¼ sections are an inch or more higher than the top of super No. 1, and a groove ⅜ inch from bottom of super No. 2 admits tin supports for the section-holder.

Now, I am at a loss to know how proper spacing can be given. MISS WISCONSIN.

1. The bee-keeper is right that increase, either natural or artificial, is at the expense of the honey-crop, if that is his meaning. But your asking whether the increase should be one, or two, from each colony, and saying in close connection with that that little surplus is obtained "if only one" new colony is formed, sounds as though he meant that there would be more surplus if two new colonies were made. That can hardly be correct anywhere in Wisconsin. It could be true only where a long, heavy flow came late in the season. In your State, and with your harvests, you will probably find that a colony will give its greatest yield if it happens to be one of that accommodating sort that directs all its energies to the amassing of stores, not bothering its head about sending out any emigrants to populate some other hive or hollow tree. In actual practice most bee-keepers try to limit increase to a single new colony formed from each old one, while some limit the increase to one from each two old ones. In this locality we try to limit to less than that, but we have a time of it. You may be assured that making an increase of two from each colony will not give you more surplus than an increase of one.

2. Ignorance of the exact construction of the supers of the Improved Langstroth-Simplicity hive makes it difficult to answer. It looks just a little as though your second super were made different from the first, and it can hardly be that such is the proper thing. If the tops of sections are an inch higher than top of super No. 1, and bottoms of sections only ⅜ of an inch higher than bottom of super in No. 2, there's plainly a misfit. It looks as if by some means there should be more than ⅜ of an inch, and you should raise the supports up more than an inch from the bottom, so that the bottom of super No. 2 should telescope down over the sections in No. 1, and still leave a space of ¼ inch between the two sets of sections. In any case, all supers should be perfectly interchangeable, and so should all be alike.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.

By E. E. HASTY, Sta. B. Rural, Toledo, Ohio.

MENDING A LEAKY WOODEN TANK.

That a wooden tank otherwise leaky can be made perfectly tight by covering it internally first with manila paper and then with hot paraffin (as per page 436) is a good thing to remember. I do not feel like praising the arrangement very highly, however. I fear the first time it gets empty more or less of the paper will get knocked off. Have a tank that is permanently tight, even if it does cost quite a bit more.

CHEMISTS AND HONEY DEFINITIONS.

Quite willing am I to see Mr. Dunlop go for the chemists—when they get outside their province and try to upset definitions which have stood for ages. Still, perhaps he may be getting on thin ice at one point. If man should put oil of garlic in milk it would be an adulteration, and a bad one. If the cow puts it in it is not an adulteration—perhaps. If man puts filthy water in milk it is an abominable adulteration; but if he puts it in *first running it through the cow*, how then? The practical distinction is getting pretty slender. Poisonous, disgusting and uneatable honeys are to be avoided, and proceeded against all the same whether we put them in the same class with adulterated honeys or in a class by themselves. Shifting the skunk from one classification to another—we need not resist that with any idea that it is going to deodorize him. Page 437.

DOUBLING WEAK COLONIES IN SPRING.

I have an apiary that often ranges above a hundred colonies, and yet I want to thank Allen Latham for his article on the weak colony in spring—from the small apiary's point of view. Most of us, I reckon, do not find doubling up in spring a very satisfactory operation. But shaking the little forlorn remnant into a hole in the ground and covering them up, there's no particular profit in that; and in addition it's unpleasant to one's feelings. Doubling up saves the unpleasantness, and gets the problem off one's hands. I also will plead guilty to the soft impeachment of being willing often to save a colony by doing for them much more than they are worth. We are not, I trust, mere two-legged bears with certain mental improvements. But if he had asked me I should have guessed that four weeks with a hot-water can every day would have netted more harm than good—forgotten once in awhile, and also making cold mornings worse by contrast. All's well that ends well. I suspect that particular colony was a little abnormal in devoting so large a share of its energies to house-cleaning. With me the *somewhat weak* colony is apt to be provokingly remiss about cleaning up, except just as far as it needs the combs. That nurse-bees using much flour instead of pollen are apt to find defecation difficult, is a rather important item, strong reason for waiting till natural pollen comes. Page 438.

THINGS WE DON'T KNOW—AND DO KNOW.

So H. V. Poore thinks it would make a longer article to tell what he has yet to learn. Alas, we can not tell what we have not found out yet! And there is one circumstance still worse than that. We tell what we have learned wrongly with much greater facility than we do what we have learned rightly. The latter seems so commonplace and uninspiring that we give it the go-by. Page 439.

A WOMAN'S BEES AND POULTRY.

Prayer-meeting. Small boys intent on fun ranging around outside. Colony of bees in buggy waiting to be driven home after devotions are over. These are not collocations to be recommended—too much like pin-wheel in powder magazine. But never mind; Mrs. Wingate has tried both a flock of poultry and an apiary of bees as home money-getters, and finds the latter to succeed much the better. Her testimony is valuable; testimony on such points being much more valuable than theory. Of course it goes without saying that poultry is confining in its every day demands, while bees allow lots of vacation time. Page 439.

THE MISTAKES OF THE PRINTER.

For champion idiocy the printer's "out" is quite in the habit of taking the cake. For example see in the next to the last caption of my department on page 441. According to that bees feed young queens through gauze presumably with sting poison. I can only hope that the reader may conjecture that the doings of two different sets of bees have got condensed into one. Still I *do* much prefer to say things myself rather than burden the reader with slinging his own English—and, eke, untangling mine if possible.

[The following is the paragraph referred to in the above, with the omitted part in italics:—EDITOR.

QUEENS AND BABY NUCLEI.

If a queen is put in a baby nucleus only in warm weather, and only when ready to mate, the harm the new device does would seem to be reduced to a minimum. Quite curious if queenless bees are less tolerant of supernumery young virgins than bees of a colony with a laying queen are. According to John W. Pharr, page 346, the latter will feed them through the wires, *while the former succeed in killing them through the wires*—presumably by the amount of sting-poison which they evaporate. Yet possibly this last may be wrong. All queens soon die from nerve causes if entirely bereft of company. Perhaps with only enemies for company death would be about as speedy, and the cause about the same.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to DR. C. C. MILLER, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Use of the Drone-Trap—Second Swarms

1. Is there not danger of suffocating the bees with a drone-trap?

2. After the first swarm issues, how soon can I look for another? MISSOURI.

ANSWERS.—1. There is little danger of doing any harm with the trap, although it seems to annoy the bees somewhat, and there is a bare possibility of an extreme case with such a multitude of drones that the trap would become entirely filled and suffocate the bees. But such a case has never been reported yet that I know of.

2. A second swarm usually issues about 8 days after the first, but the time may be less, and it may be more. The 2 swarms you mention in your letter were three days apart. If the first one was a prime swarm, then the first one had been delayed about five days. The issuing of a prime swarm is sometimes delayed by bad weather, and it may be delayed by the queen failing for some reason to go with the swarm. It is quite possible, however, that both your swarms were afterswarms. You may have failed to see the prime swarm, or it may have issued and the queen may have been lost or killed, the swarm returning. Then the 2 swarms would each have virgin queens, and it is nothing unusual for 2 afterswarms to be three days apart.

Handling Bees Without Being Stung—Clipping Queens

1. We occasionally have men pointed out to us who, it is said, "can do anything with bees;" that bees will not sting them as they do other people. Is it because they are coo and self-possessed, ignoring a sting or two and by avoiding quick, rapid movements bees are less likely to sting them? or is there really a class of people protected by electrical influence, or otherwise, against bee-stings?

2. A young man in this vicinity handles wasps freely. He claims that by holding his breath they do not sting him. Others who tried it were promptly stung before they could catch their breath. Can you explain the trick?

3. I had a man manipulate my hives, which he did with bare hands, and yet the bees did not sting him, while they persisted in trying to sting me, although I stood 10 feet distant in the rear. Why was this?

4 How do those queens that have their wings clipped, and are unable to fly, become fertilized, as I understand that this occurs during the flight of swarming?

5 Is there not danger or rendering queens sterile by clipping their wings so they can not fly?

6. Is it customary to clip both wings, or one only?

7. When is the proper time to do it? NEW YORK.

ANSWERS.—1. It is doubtful that there is any one whom bees will not sting when they are in the right mood for stinging. But it must be remembered that comparatively few bees ever sting, or try to sting. If 50 bees should be flying about you at one time, trying to sting you, it would be a big lot, but there are thousands of other bees flying about that show no hostility. The person who is nervous and makes quick movements is likely to find it resented by the few irascible bees, while one who is slow and deliberate in movement will be unharmed. There may be a difference in the odor of different persons that the bees detect, and that may make some difference as to the bees stinging.

2. Some time ago it was claimed that a bee could not sting one so long as one held his breath. It's all bosh, as any one can easily prove. Quiet deportment is probably the secret of immunity from stings of wasps.

3. Often bees will sting one more readily at a little distance from the hive than when close up; I hardly know why. I work among bees with bare hands, and there are thousands upon thousands of them that never sting me; others, however, don't seem to have the proper respect for me, so I get a good many stings. As already said, difference in the quickness of motion, and difference in the odor of the body, may make bees sting one person more than another. Clothing may also make a difference. Woolen or soft cotton goods are not so good for bee-keepers as cotton or other goods with a hard surface. Dark clothing is also more offensive to the bees than light colored.

4 and 5. Clipping the wings of a queen before she is fertilized would ruin her. When a prime swarm issues, the queen is a laying one, and does not need fertilization. In afterswarms the queen may or may not be fertilized during the act of swarming; but no queen should ever be clipped till it is known that she is laying.

6. I do not know that any one ever clips all four of a queen's wings. Some clip the larger wing on one side; others clip the two wings on one side. Clipping only one wing leaves the looks of a queen less impaired; but some, myself among the number, prefer to clip both wings on one side because it makes it a little easier to see at a glance, when a queen is moving over the combs, whether she is clipped or not.

7. Any time at the convenience of the operator after she begins to lay. A common custom is to look through the hives as soon as convenient after the bees get to work in the spring, so as to clip any new queens that have come upon the stage through supersedure the preceding fall.

Methods of Increase Other Than Swarming

I have 8 strong colonies of bees, and I also have 4 Danzenbaker hives with full sheets of foundation, desiring to have them drawn out in worker-comb. Being a beginner I don't know how to proceed to increase to 4 more colonies in the Danzenbaker hives, but here is my plan:

To order 4 queens, and on their arrival—before going any further I wish to say that 7 of my colonies are in Langstroth hives, and the remaining one is in a 2-story Danzenbaker, with 10 frames of honey above and quite a little in the brood-chamber—take two frames, or one frame, of honey, placing same in a Danzenbaker hive with 8 or 9 frames with full sheets of foundation, and then go to another strong colony and shake half of the bees in this hive, placing a piece of screen over the entrance, then place the caged queen over the frames to be released by the bees. Then set all in a new place. After 4 days take the screen off the entrance. Look at them about September, and if in poor condition feed them.

My point is to increase to 4 more colonies, using the Danzenbaker hive, taking frames of honey from another Danzenbaker hive, so the bees would not starve until they get started.

I bought 6 queens, and not receiving any instructions with them, I introduced them to the best of my knowledge, after reading in the "A B C of Bee Culture" how to introduce. With the first 2 colonies I was successful in finding the queen, and after killing her I looked for queen-cells; not finding any I placed the caged queen over the frames, and after about 5 days I noticed them carrying in pollen and working.

In colony No. 3 I found no queen, but about 8 queen-cells, so I placed an empty hive-body on the ground, and after putting a piece of perforated zinc over the entrance, I brushed all of the bees in front of the hive and let them run in, then placed the frames back in the hive again. I put a queen-excluder over the hive-body, and left the zinc over the entrance for nearly a week, and found them gathering pollen and working.

Hive No. 4, not having time on Monday, when I removed the other queens, to remove the queens in the other 3 hives, I just placed the caged queens over the frames, and it being bad weather I couldn't do anything with them until the following Monday, when I went to hive No. 4, and finding the queen I killed her and removed the stopper in the end of the cage.

No. 5, not finding any queen I took an empty hive-body, placed a piece of perforated zinc over the entrance, shook all the bees in front, and let them run in, placing the frames in the empty hive-body. I put a queen-excluder over the hive-body containing the bees, and placed them on their stand. I did likewise with No. 6. I noticed that they are all working and gathering pollen. Do you think I was successful? After introducing a queen, and the bees gather pollen and go to work, doesn't this signify that everything is satisfactory? DELAWARE.

ANSWER.—Your plan of making the 4 new colonies will work, although there are objections to it. The loss of time while the bees are imprisoned 4 days is quite an item. The bees will fret no little at the confinement, and you will find an unpleasant number of them dead when you open the entrance, especially if the weather is very hot. Better keep them in the cellar during their time of imprisonment.

Here is another plan that is not open to the same objections: From the colony in the Danzenbaker hive, take one frame of brood without any bees. Put it in one of the empty Danzenbaker hives, the rest of the hive being filled with frames of foundation. Set this new hive on the stand of one of the Langstroth hives; shake into the new hive the bees from half the frames in the Langstroth hive, after first finding the queen, which you will also put in the new hive, and set the Langstroth hive in a new place, putting into it your new queen caged. Do this with each of the four hives, and the bees will work right along with no interruption.

After introducing a queen, if the colony is working vigorously and carrying in big loads of pollen, it is pretty good evidence that the queen is all right; but the safe plan is to look and see whether eggs are in the frames. You were certainly successful in introducing, if the whole 6 are laying well.

I thank you very much for your kind words in appreciation of this department.

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Self-Requeening—Hiving Wild Bees in Trees—Where to Fasten Section Foundation—Ants in Hives

1. A week ago I transferred a frame of brood from an 8-frame hive to a Danzenbaker hive, cutting the comb of course to fit the Danzenbaker frames, but I did not transfer the queen, and I gave them the ⅞-inch entrance. Do you think that was right, or should I have given them the small entrance? How long will it take them to rear a new queen? I put the new hive on the old stand.

2. I would like to know some good method of getting a colony of bees out of a hollow tree into a frame hive.

3. When one receives a queen from a queen-breeder, does the cage always have the name of the kind of a queen on it?

4. In putting foundation in sections on which end or side of the section should the foundation be put, the one that has the dovetailed end, or the other?

5. Why not use full sheets of foundation in every other frame instead of every one, to insure straight combs in the brood-chamber?

6. A neighbor of mine has one colony of bees whose hive is fairly alive inside with little black ants, although the bees seem to be working well, but the ants are on the bees, in the combs, and everywhere else. What can be do to get them out? I thought mine might get that way, and I would better find out what to do. KANSAS.

ANSWERS.—1. Unless they build down into it the larger entrance is better. Probably they will not build down. If no queen-cells were already started when the queen was taken away, it would be about three weeks before they would have a laying queen. It is a severe drawback to leave a colony so long without a laying queen at the beginning of the season.

2. Something depends upon the tree and the hight from the ground to the swarm. If the bees are low down, the side of the tree can be chopped away, leaving the brood-nest exposed, when the combs can be cut out and fastened in frames. If the bees are too high for that, it will depend upon circumstances whether to cut off the tree above the bees and below, letting down with a rope the section containing the bees, or to fell the tree and run the risk of some smashing.

3. Generally not, I think, although I do not know.

4. I prefer to put in the foundation so that the dovetailed corner shall be at the bottom, but a certain gentleman who does some very interesting afterthinking for these pages, and for whom I have very great respect, prefers the dovetailed corner at the top. But I think he does not use bottom starters, and I do.

5. It will not make as even combs as to have all frames filled alike. Rather than have every alternate frame filled and the rest empty, I would have all the frames filled half full. In either case you are likely to have more drone-comb than is profitable.

6. I have known ants to be troublesome at the hives on account of getting on the hands of the bee-keeper, and apparently annoying the bees, but the bees always kept them driven out, and I never knew them to be allowed on the bees as you say. (Down South it is different.) Trace the ants to their nest, and destroy them with gasoline or bisulphide of carbon.

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Taking Off the Hive-Cover—Sowing Buckwheat—Perhaps Milkweed Pollen

1. Is there any danger of the brood getting chilled if the hive-cover is taken off when it is warm, and if off for any length of time?

2. What do you think is the best to sow as a honey-plant? Is not buckwheat about as good as there is? About what time should it be sowed?

3. What is the cause of bees coming out of the hive with their legs fastened together? IOWA.

ANSWERS.—1. On a warm day a frame of brood well covered with bees may be left out a long time without any harm, perhaps all day if the bees do not leave it. Without bees the larger larvæ will begin to crawl out of the cells if left out too long—starving, probably, rather than chilling. If the weather is too cool for bees to fly freely, avoid taking out brood, or at least keep it out as short a time as possible.

2. Buckwheat is good, and probably there is no better time to sow than the usual time farmers sow for a crop in your locality. Sweet clover is also good, and perhaps rape or mustard.

3. The pollen from milkweed sometimes adheres to the feet of the bees, and thus gives them the appearance of clinging together.

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Perhaps Motherwort—Red Clover Bees—Don't Swarm or Work

1. I am sending the top of a plant that grows on our farm in great abundance, when not restricted. There is none of it on adjoining farms, and no one seems to know what it is. It grows from 2 to 3 feet tall, and the blossoms extend up and down the stalk for 8 or 10 inches. It seems to be a great honey-plant, for I have seen the stalk black with bees when in blossom. What is it?

2. What kind of bees is the sample enclosed?

3. Can red clover Italians get honey from red clover? There are great amounts of red clover here, but my bees can not get it. I know this, for the other day while looking over my bees I found a red clover blossom which had grown right in the entrance of one hive; I pulled it up and found in it a large amount of nectar.

4. I have some bees in box-hives, and 2 colonies of them have been covering the fronts of the hives for three weeks and haven't swarmed yet. They will not work, either. What is the matter with them, and what can I do for them? MISSOURI.

ANSWERS.—1. It looks like motherwort.

2. It is hard to tell anything about bees that are mashed in the mail; but the sample looks like blacks.

3. There is difference in the length of the tongues of bees, and there would consequently be a difference in the depth to which bees can reach in red clover; so there is no reason why there should not be obtained a strain of bees able to do a good deal more than other bees on red clover. There is also a difference in clover. Sometimes, either because the blossom tubes are shorter, or because they are more fully filled with nectar, even black bees may be seen working on red clover.

4. I don't know. I'm afraid there's lazy blood in them. It is possible that they have young queens, and don't care to swarm, and are crowded out of the hive for want of room. If you drum them out, and put them in frame hives, it might stir them up to work; at any rate you could then see more about their condition. Likely, however, they will shortly swarm, and the swarms may then show better industry.

◆

How Much to Smoke Bees—Requeening to Change Stock

1. How much smoke should I give a cross colony of bees?

2. When and what is the best way to requeen some of these warrior colonies? I expect to try some of those gentle long-tongued yellow queens. O, no, they don't "bite!" Well, just come to my apiary and I will show you some of those "yellow jackets." But they store lots of honey. WISCONSIN.

ANSWERS.—1. As in other cases, use as little as possible, but enough to subdue them. That isn't very definite, is it? Perhaps I might say, keep on smoking so long as the bees keep darting out at you, and stop as soon as they beat a retreat. With most bees a very little smoke is necessary, and if you keep on smoking they will boil out and run over the sides of the hive at the top. That's too much. Some have reported bees of such disposition that smoke seemed to have little or no effect on them, if indeed it did not make them fiercer, and the only thing to do was to manipulate very carefully. Yours are hardly of that kind.

2. Right away, or as soon as you can give a queen of gentler nature, put her in the hive caged so the bees can not free her. In two or three days open the hive, kill the old queen, and leave the new one in the cage, but with candy which the bees can eat out to liberate her.

Reports and Experiences

Uniting Weak Colonies with Strong

Dr. Miller asks for reports from those who have had experience with uniting a weak colony with a strong one in the spring with the use of the excluder, to save both queens.

The past spring I had a strong hybrid colony in two extracting-supers for a brood-chamber—call it No. 6. About 4 rods to the southeast was a colony in a 10-frame Langstroth hive with a fine queen and about one pint of bees—call it No. 7. About 8 rods to the northeast was a colony in a Jumbo 10-frame hive which had lost its queen but had a fair-sized cluster of bees—call it No. 8.

I put 2 wood-zinc honey-boards on No. 6 so the queens could not get their heads together. I then placed No. 7 on No. 6. Of course a few fielders were lost from No. 7, but as best I could tell they seemed to become welcomed at their next-door neighbor's, which was a strong colony.

Now, No. 7 staid on No. 6 about 10 days, by which time it had drawn up a strong force of young bees and developed a fine lot of brood, and by this time No. 8 had developed laying workers. I then placed No. 7 on top of No. 8, the field-bees returning to No. 6. In a few days the laying-worker nuisance was done with, and the queen, brood and bees of all ages were all together in the upper story, and most of the honey. I then removed the empty combs from the lower (Jumbo) hive, spread those which had a little honey, and as soon as they carried up the balance of the honey I removed the Jumbo hive and had a fine force ready for business.

I could not see that No. 6 was hurt a particle. The queen was there all right and laying profusely, and bees in great enough abundance. I had calculated that it would dampen the swarming propensity in No. 6, but afterward concluded to break up that colony into nuclei. and did not wait to see results on swarming. W. T. Cary.

Carroll Co., Mo.

Bees Doing Well Now

Bees are doing well now. I have had only one swarm so far, and it was a fine one. I had only 2 colonies to begin with in the spring, but I found a big one in a hollow log, which with the new one makes 4 colonies. David Haynes.

Dallas Co., Tex., June 26.

Bees Doing Well

I have now about 45 colonies. I began with 25, and they seem to be doing quite well considering the weather, for it rains a great deal this season. There is plenty of forage for honey. Basswood is just beginning to flow. The weather is clear this morning, so look for a lot of honey now. Some of my colonies have stored nearly 50 pounds of surplus honey. We have plenty of alsike clover, also white and red. N. H. Keizer.

La Crosse Co., Wis., July 5.

A Swarming Time

We are completely outdone, out-generaled, and non-plussed. Adjectives and swear words are useless. Our woe is caused by the busy bee that is supposed to gather honey all day long, and later be robbed of its stores by wanton man. If any veteran bee-man has any bee-lore that fits a tenderfoot, let him exhale it, or forever after hold his peace.

Hear our troubles and weep.

As the Editor of the American Bee Journal knows, my brother and myself have been dallying with the supposedly useful bee for lo, these 3 summers. Last fall we put into winter quarters 9 colonies. Five survived the rigors of our Harveyized-steel winter, and this spring we doped them liberally with granulated sugar at $6.25 per barrel.

May 20 the first swarm came out. This was very kind of them, and we hived the industrious insects promptly. But listen: Those bees haven't done a thing since that date but swarm and—sting. Twenty-three swarms have emanated from those 5 since May 20. That is the truth, the whole truth, and nothing but the truth, so help us John Rogers, and we refer you to Stoughton Cooley, of Cook County, as to our veracity and other desirable qualities. He was out here and saw the bees. We changed hives and tried other anti-swarming devices, but the misguided insects went on doing business at the old stand. It is a fact that one colony sent out a swarm, and three days later sent out another swarm. How is that for industry?

A short time ago we noted a wail from somebody that his bees didn't swarm. Shades of the gentle Huber! If he lived near us we could strike up a bee-trade in short order. However, we must bear our burden of bees alone. They haven't swarmed now for two days, and we are resting easier.

By the way, we noted in the Bee Journal that some gentleman tried shooting swarms from high limbs successfully. A little later we noted that some one in Ohio, who seems grievously afflicted with afterthoughts, criticised the aforementioned shotgun method caustically.

Now we 'fess up. A swarm clustered on a high limb shortly after we read of this unique method. My brother said he would try it. The shotgun was brought out and two shells slipped in. He aimed at the limb, about 6 inches from the clustered bees, on the tree side, and let go both barrels. It worked beautifully. The shock knocked the bees down, and they fell in a cluster at his feet. (He had taken the precaution to don a bee-veil.) The jolting made them pretty mad at first, but they took the matter philosophically, and after circling a few moments, clustered on a low cherry-tree, and we had no more trouble with them. That's all.

If any one can beat the record of 23 swarms from 5 in less than two months, we would like to hear of it. Some of these hilarious swarms have begun work in the supers, so we have a faint hope that they may reform in time. Frank E. Kellogg.

McHenry Co., Ill., July 14.

Good Promise from Basswood

We have had a very good honey crop so far, with a good prospect for basswood and willow-herb. Basswood is 10 to 15 days later than it has been in years; it will not be in for nearly a week yet. But I never saw a better promise for a bloom. Elias E. Coveyou.

Emmet Co., Mich., July 17.

Rain Spoiled the Basswood

Bees are doing fairly well, though it rained every day for two weeks. Basswood slipped by without the bees getting much more than a smell. White clover and catnip are now in bloom, and these rains will give us a good stand of red clover and fall flowers though it did spoil our basswood. H. G. Quirin.

Huron Co., Ohio, July 14.

Not a Large Honey Crop

The honey crop is of extra-good quality and lots of it. But nights are cold, and there have been many foggy days, and the bees failed to reach home, so many have perished with their loads. Many colonies failed to store last year, and those not fed starved, consequently the California honey crop will not be overly large this year.

Delos Wood.

Santa Barbara Co., Calif., July 4.

May Be a Short Crop

The bees are hardly holding their own. If they don't get some honey before long I am afraid our honey crop will be short for 1905.

R. R. Pattison.

Otero Co., Colo., July 6.

Getting a Fair Honey Crop

I think we are getting a fair honey crop in this State. The weather is spotted, the flow is not continuous, and there is too much swarming; things seem abnormal, but the clover is still fresh, and with good weather it should secrete nectar. The basswood is full of buds and will open very soon.

Geo. E. Hilton.

Newaygo Co., Mich., July 6.

Honey Season in the East

Honey has been coming in quite freely in some parts of the eastern States, some bee-keepers having taken off some extracted and in sections. What the season will be as a whole I am unable to say. Bees have been building up quite well, though in some localities there was quite a winter loss.

H. S. Ferry.

Westchester Co., N. Y., July 5.

Please mention Bee Journal when writing advertisers.

CONVENTION NOTICES.

National.—The International Fair is to be held in San Antonio, Tex., Oct. 21 to Nov. 1. When this Fair is in progress there are very low rates in force on the railroads out for 600 or 700 miles. Then there are harvest excursions from the North on the 2d and 4th Tuesdays of the month. The 4th Tuesday in October comes on the 24th. Considering these facts, it has been decided to select Saturday, Oct. 28, as bee-keepers' day at the Fair. This will give ample time for members from the North to reach the city by starting the 24th. The regular sessions of the convention will begin Monday, Oct. *30, and continue three days.*

The headquarters of the National Association will be at the Bexar Hotel (pronounced Baer, long sound of a), corner of Houston and Jefferson Sts., and rates are only $1.00 a day, and up. The convention will be held at Elks' Hall, 125 W. Commerce St., only two blocks from the Bexar Hotel.

Flint, Mich. W. Z. Hutchinson, *Sec.*

Missouri.—The Missouri State Bee Keepers' Association will meet in Sedalia, Aug. 22 and 23, opening session to be at 2:30 p.m., Aug. 22. The room to meet in will be named later on. The State Fair meeting there at the same time will obtain low railroad rates from all parts of the State. The Livestock Association also meeting there on the 24th will give us some inspiration. Hon. Geo. B. Ellis, Secretary of the Agricultural department, will be there and give a talk and lend a helping hand. Louis A. Osborn, of that place, has kindly offered to act as host, and will direct to the place of meeting and to accommodation. Hotel accommodations can be had at $1 to $2 a day. Private boarding cheaper. Let us turn out en masse and have a glorious time as well as to effect some extraordinary progress. W. T. Cary, Sec.

Langstroth on the ⁂ Honey-Bee

Revised by Dadant—Latest Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.20, or club it with the American Bee Journal for one year—both for $2.00; or, we will mail it as a premium for sending us **THREE NEW** subscribers to the Bee Journal for one year, with $3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

GEORGE W. YORK & CO.
334 Dearborn Street, CHICAGO, ILL

Learn Telegraphy and R. R. Accounting

$50 to $100 per month salary assured our graduates under bond. You don't pay us until you have a position. Largest system of telegraph schools in America. Endorsed by all railway officials. OPERATORS ALWAYS IN DEMAND. Ladies also admitted. Write for Catalog.

MORSE SCHOOL OF TELEGRAPHY,
Cincinnati, O. Buffalo, N.Y. Atlanta, Ga. LaCrosse. Wis. Texarkana, Tex. San Francisco, Calif.

29A17t Please mention the Bee Journal

BEE-KEEPERS' SUPPLIES.

We are now able to quote lower prices than ever before. Highest quality guaranteed. We handle the G. B. Lewis Co's goods. Italian Bees for sale in dovetailed hives. Send for my 88-page Catalog, and leaflet for beginners. They are free.

44Etf W. J. McCarty, Emmetsburg, Iowa

ITALIAN QUEENS

EITHER GOLDEN OR HONEY QUEENS AFTER JULY 1.

Our Goldens will come up with any other Golden strain. Our Honey-Queens are what some breeders call "Red Clover Queens."

	1	6	12
Untested	$ .75	$ 4.00	$ 7 00
Tested (or War. Tested)	1.25	7.00	13 00
Breeders	5.00		
2-frame Nuclei (no Queen)	2.00	11.00	22 00

When Queens are wanted with Nuclei add price of any Queen wanted. We guarantee safe arrival of all Queens and Nuclei. Our breeders may be returned after 30 days, if satisfaction is not given. Cash must come with all orders. Orders are booked and filled in rotation.

D. J. BLOCHER PEARL CITY, ILL.

16Etf Please mention the Bee Journal.

Queen-Clipping Device Free!

The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. It is used by many bee-keepers. Full printed directions sent with each one. We mail it for 25 cents; or will send it **FREE** as a premium for sending us One New subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

GEORGE W. YORK & CO.,
CHICAGO, ILL.

QUEENS

Best 3-band Italian Bees free from disease. One Untested Queen, 75 cents; 6 for $4; 12 for $7.50. Two-frame Nuclei, with Queen, $2 25 each.

LUTHER PRESSWOOD,
28E5t RELIANCE, Polk Co., TENN.
Please mention Bee Journal when writing

Second Hand... Comb Foundation Mills

Honey Glassware

We have for sale a 6-inch and a 10-inch Second-Hand Comb Foundation Mill. Used scarcely any; good as new. If interested write for prices.

¾-lb. and 1-lb. Octagon **Tip-Top Glass Honey-Jars.** Prices: ¾-pounds, $4.50 a gross; 3 gross for $13. 1-lb., 1 gross, $5.25; 3 gross for $14.50. Address,

YORK HONEY AND BEE SUPPLY CO.
(Not incorporated)
141 Ontario Street, - CHICAGO, ILL.
Please mention Bee Journal when writing

Do You Need Queens? By Return Mail?

If so, we can fill your order with the best Queens that money can buy. Try our strain of 3-band Italians; they will not disappoint you with empty supers. Untested Queens, 75 cents; $8 per doz. Tested Queens, $1 each. Send for circular.

J. W. K. SHAW & CO.
13Atf LOREAUVILLE, Iberia Par., LA.
Please mention Bee Journal when writing

Please mention Bee Journal when writing Advertisers.

Dittmer's Foundation is the Best.

Send for Catalog, Samples and Discounts, and judge for yourself. 1904 output, 50 percent increase over 1903.

Full line of SUPPLIES, wholesale and retail.

Working Wax into Foundation for Cash a Specialty.
E. GRAINGER & Co., Toronto, Ont., Sole Agents in Canada for Dittmer's Foundation.

GUS DITTMER, Augusta, Wis.

Wisconsin Basswood Sections

And Prompt Shipments

Is what we are making for our customers.

— DOVETAILED HIVES AND SHIPPING-CASES —

We carry a full line of SUPPLIES. Ask for Catalog.

THE MARSHFIELD MANUFACTURING CO., Marshfield, Wis.

What Adel Bees Do

E. MILTON, MASS., May 27, 1905.

Send me queen same strain as the one sent 1904. That queen proved the best queen I ever received. Her bees filled a super before May 15, 1905. ROBT. FORBES.

All Tested Queens are $1 each.

HENRY ALLEY, Wenham, Mass.
Please mention Bee Journal when writing

Italian Bees and Queens FOR SALE

1-frame Nucleus with Queen............$1 50
1 Tested Queen, $1.00; 6 for............ 5 00
1 Warranted Queen, 75c; 6, $3 50; 12 for 6.00
Satisfaction guaranteed. Address,

N. STAININGER, Tipton, Iowa.
30A3t Please mention the Bee Journal.

Send for Our 1904 Catalog and Price-List.

OUR HIVES AND SECTIONS

Are Perfect in Workmanship and Material.

By sending in your order NOW, you will SAVE MONEY, and secure prompt shipment.

PAGE & LYON MFG. CO., New London, Wis. U.S.A

Tennessee Queens

Owing to the great demand for my TENNESSEE QUEENS for several seasons, and the quantity of standing orders from old customers, I decided not to advertise until my books were cleared of orders, and thus avoid disappointing customers.

I am now ready to fill orders by **RETURN MAIL.** Breeders used: Imported dark leather-colored Italian; my selections from light imported Italian; Moore's long-tongue; golden; Carniolan (mated to Carniolan drones in distant yard, and to Italian drones); imported Caucasian (lately received, mated for the present to Carniolan and Italian drones).

Prices until Oct. 1.		After Oct. 1.		Tested—	
Untested 12 for	$6.00	Untested 12 for	$7.50	Each	$1.50
" 6 for	3.25	" 6 for	4 00	Breeders—	
" 1 for	.60	" 1 for	.75	Each	3.00

27A13t **JOHN M. DAVIS, Spring Hill, Tenn.**

You will have to hurry to get your Shipping-Cases

We are running overtime filling orders, but are willing to run day and night to insure prompt shipment. No extra charge for this service. Besides, our SHIPPING-CASES are sold for less money and are of better quality than you can buy elsewhere. This is no pipe dream, but a proven fact. Ask those who have bought from us.

All cases are made with one-piece covers in any width up to 13 inches. Send us your trial order **NOW**. Be sure to mention width desired.

JOHN DOLL & SON,
Power Building, MINNEAPOLIS, MINN.

Queens by Return Mail

The **Standard-Bred** kind, reared by some of the best queen-breeders in America, and warranted purely mated. Sent **by return mail** at these prices: One Untested Queen for 75 cents; 3 for $2.10; or 6 for $4.00.

An Untested Italian Queen-Bee FREE as a Premium

For Sending One New Subscriber

As has been our custom heretofore we offer to mail a fine Standard-Bred Untested Italian Queen to the person who complies with the following conditions, all of which must be strictly followed:

1. The sender of a new subscriber must have his or her own subscription **paid in advance** at least to the end of this year.

2. Sending your own name with $1.00 for the Bee Journal will not entitle **you** to a Queen as a premium. The sender must be already a paid-in-advance subscriber as above, and the new subscriber must be a **NEW** subscriber; which means, further, that the new subscriber has never had the Bee Journal regularly, or at least not for a whole year previous to his name being sent in as a new one; and, also, the new subscriber must not be a member of the same family where the Bee Journal is already being taken.

We think we have made the foregoing sufficiently plain so that no error need be made. Our Premium Queens are too valuable to throw away—they must be **earned** in a legitimate way. They are worth working for.

If you can not get a new subscriber, and want one or more of these Queens, we will send the American Bee Journal a year and a Queen—both for only $1.50.

Address all orders to

GEORGE W. YORK & CO.
334 Dearborn Street, CHICAGO, ILL.

G. B. Lewis Co's Goods at Factory Prices

We carry a most complete line of **BEE-KEEPERS' SUPPLIES.** Send for catalog. It's free. Foundation Cutter free with each order, if you state where you saw this ad.

13Atf **NORRIS & ANSPACH, Kenton, Ohio.**

MONDENG MFG. CO.

We are...... Manufacturers of **Bee-Keepers' Supplies**

SHIPPING-CASES — EXTRACTORS —SECTIONS—HIVES—AND EVERYTHING FOR THE BEE-KEEPER

Send for Illustrated Catalog and Price-List. Prompt Shipments. Low Prices.

MONDENG MFG. CO.,
147 and 149 Cedar Lake Road, MINNEAPOLIS, MINN.

Capital City Apiary!

Fine Italian Queens

Untested, after June 15, 75c; Tested, $1.00; Breeders—the very best, $5.00. Terms cash with order. Safe arrival and satisfaction guaranteed. **WALTER S. HOSS,**
1123 Blaine Ave., INDIANAPOLIS, IND.

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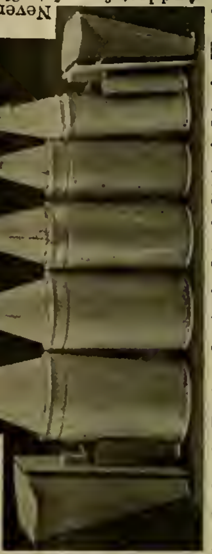
4 Largest Sizes Soot Burning

Never Go Out

And last from 5 to 21 years



BINGHAM Original Direct Draft CLEAN Bee Smokers

Pat'd 1878, '82, '92 & 1903

Tin 4-in. Smoke Engine 3½-inch 3-inch 2½-inch 2-inch Wonder
$1.50. $1.10. $1.00. 90c. 65c.—per mail.

Sent on receipt of price per mail.

T. F. BINGHAM, Farwell, Mich.

OTISVILLE, PA., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. FRED FODNER.

If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published, send $1.20 to

Prof. A. J. Cook, Claremont, Cal.,

—FOR HIS—

"Bee-Keeper's Guide."

Liberal Discounts to the Trade.

DEATH TO LICE.

LOSS BY LICE

on poultry amounts to many times the cost of **Lambert's Death to Lice**—the sure preventive. Loss can be saved and profit made by its use. Frees sitting hens from lice without harming eggs or chicks. A trial 10c box will prove it. 100 oz., by express, $1.00.

O. K. STOCK FOOD CO.,
D. J. Lambert, Vice-Pres.
406 Monon Bldg., Chicago, Ill.

The Rietsche Press

Made of artificial stone. Practically indestructible, and giving entirely satisfactory results. Comb foundation made easily and quickly at less than half the cost of buying from the dealers. Price of Press, $1.50—cash with order. Address,

ADRIAN GETAZ,
44Atf KNOXVILLE, TENN.

☞ J. G. Goodner, of this State, writes me that he "prefers to pay $25 for a Rietsche Press than do without it."—A. G.

BLACK BREASTED RED GAMES—"The KING of Poultry." Large size, good layers of finest eggs. Hardy and fearless, the best all purpose fowl. Willow legs and Bay eyes. Illustrated circular. 25th year. **H. H. FLICK, MANCHESTER, MD.**

Queens From best honey-gathering stock, 60c. Tested Queens, $1.00.

28A4t **J. F. MICHAEL** Rt. 1, WINCHESTER, IND.

Bee Supplies

Guaranteed Superiority!

Lowest Prices

We have been making Bee-Hives, Sections, etc., for over 20 years.

New..Illustrated..Catalog free; also sample copy of

The American Bee-Keeper

(Monthly, 50 cts. a Year.)

The best magazine for beginners. (It has been published by us regularly for 15 years.)
Address,

THE W. T. FALCONER MFG. CO.,
JAMESTOWN, N. Y.

Please mention Bee Journal when writing.

— ITALIAN —

Bees, Queens and Nuclei

Choice home-bred and imported stock. All qneens reared in full colonies.

One untested queen...... $ .65
One tested qneen......... .90
One select tested queen.. 1.10
One breeding qneen 1.65
One comb nucleus (no qneen)..................... 1.00

All grades ready to send by return mail.

Safe arrival guaranteed. For prices on quantities and description of each grade of Queens, send for free price-list. 100 or 200 lbs. of Brood Foundation. Send for sample and prices.

J. L. STRONG.
204 East Logan Street, CLARINDA, IOWA.
14Atf Please mention the Bee Journal.

HONEY AND BEESWAX

When consigning, buying or selling, consult

R. A. BURNETT & CO.,
199 South Water St. Chicago, Ill.

For Queens SEND TO JOHN W. PHARR Berclair, Tex.

He will furnish at same prices as last year: Tested, $1; Untested. 75c; 5 for $3.25; 10 for $6; 15 for $8.25; 25 for $12.50; 100 for $45. He breeda Goldens, Carniolana and 3-Band Italiana. Also 1, 2, and 3 frame Nuclei, and full colonies. Prices given on application. Pharr pays the freight, and guarantees satisfaction on all Queens. To do justice and judgment is more acceptable with the Lord than sacrifice. —(Prov. 3: 21.) 6Atf

Please mention Bee Journal when writing.

New Comb Honey-Crop of 1905

We believe it would pay those having it in car lots or otherwise to write us. Give us your lowest spot cash prices, and fully describe the goods and style of package; when you can ship, etc. We handle more of these goods than any other firm in the U.S. Yours for business,

THOS. C. STANLEY & SON, Bees and Honey
28Atf MANZANOLA, COLO.

Please mention Bee Journal when writing advertisers.

Headquarters for Bee-Supplies

ROOT'S GOODS

Queens Now Ready to Supply by Return Mail

Stock which cannot be excelled. Each variety bred in separate apiaries, from selected mothers; have proven their qualities as GREAT HONEY-GATHERERS.

Golden Italians Have no superior, and few equals. Untested, 75c; 6 for $4.00.

Red Clover Queens Which left all records behind in honey-gathering. Untested, 75c; 6 for $4.

Carniolans —They are so highly recommended, being more gentle than all others. Untested, 75c; 6 for $4.00.

At Root's Factory Prices

C. H. W. WEBER CINCINNATI ...OHIO...
Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

Honey and Beeswax

Chicago, July 18—Market is at a standstill, partly because of the time of year when little comb honey is consumed and partly to await the outcome of the present harvest. The weather is at present ideal and the flow of nectar makes the bees hum, that hum that puts smiles on the face of the husbandman though he be weary. R. A. Burnett & Co.

Albany, N.Y., June 17.—The honey market here is very dull now. It is between seasons. Receipts and demand very light. Very little old crop carried over, and will be in good shape for new crop, which begins in August Quotations are nominal now. White comb, 12@14c; mixed. 10@12c; dark, 10@11c. Extracted, white, 6@6½c; mixed, 5½@6c; dark, 6@6½c. Beeswax, 28@30c. H. R. Wright.

Kansas City, July 20.—New comb honey has made its appearance; fancy white in 24-section cases selling at $2 75 per case; No.1 at $2.50, and good demand. There is no new extracted in as yet, market on old stock being quotable at from 5@6c. Beeswax, 25@28c. C. C. Clemons & Co.

Philadelphia, July 19. — The outlook for honey is very good. Some lots of new white honey have already arrived and are selling in a small way, according to grade, from 12@14c. New extracted honey is selling: Fancy white, 6½@7c; amber, 5½@6½c. Beeswax in good demand at 28c.

We are producers of honey and do not handle on commission. Wm. A. Selser.

Cincinnati, July 10.—We sold to-day at our store new crop of fancy comb honey at 13½c per pound. There is still a big stock of last season's honey on the market, that is going begging at any price. Extracted honey is moving quite lively now. We sell amber in barrels at 5¼@6½c, according to quality. White clover at 7@8½c. Beeswax, 26c.
The Fred W. Muth Co.

Denver, June 26.—The demand for both comb and extracted honey is light at present, and there is enough of old stock on hand yet to last until the new crop comes in; the same is selling as follows: No. 1 white comb, per case of 24 sections, $2@$2.20; No. 2, $1.75@$2. White extracted, 6½@7½c per pound. Beeswax, 26c.
The Colo. Honey-Producers' Assn.

New York, June 19.—The comb honey market is very quiet and we are hardly justified in making quotations, Some few lots are sold here and there at 13c for fancy, and 10@12c for lower grades, but no large blocks could be moved at these figures. There is still considerable of last year's crop unsold, part of which, no doubt, will have to be carried over until the fall. Extracted honey in fairly good demand. New crop California honey selling at 6½@7c for water-white, 6@6½c for white, and 5@5½c for light amber. Southern at 50@60c per gallon according to quality. Beeswax somewhat declining; choice average stock selling at 29c.
Hildreth & Segelken

Cincinnati, O., July 17.—There is no demand for comb honey on account of the warm weather. Extracted is in usual demand for this season of the year. We quote white clover at 7@8c; amber, in barrels, at 5¼@5½c; in cans, 5¾@6c. Beeswax, 28c. C. H. W. Weber.

San Francisco, July 5.—White comb, 1-lb-sections, 11@—cents; amber, 8@10c. Extracted, white, 5½@—cents; light amber, 4@4½c; amber, 3@3½c; dark amber, 2½@—c. Beeswax, good to choice, light, 27@29c; dark, 25@26c.

There has been no wholesale movement in honey this week and no new features have developed.

SECTIONS

Millions of Sections. You want quick delivery. We have the facilities for executing orders promptly. Remember that

Quality is the first consideration about Sections. "Lewis' Sections" means highest quality. Do not be misled by low prices. A clean-cut, brilliant, white section enhances the price of your honey.

Shipping-Cases

Order your supply now. Pack your honey in cases before storing away; this keeps them in a bright, clean condition. We invite your inquiries. We can ship promptly.

Louis Hanssen's Sons
27A4t Davenport, Iowa.

Please mention Bee Journal when writing advertisers.

Oh! what will the Harvest Be?

Oh, harvest bee?
With your snow-white honey

IN LEWIS' SECTIONS PUT UP IN LEWIS' SHIPPING-CASES

SEND TO YOUR NEAREST "LEWIS" AGENT

ENGLAND
E. H. Taylor, Welwyn, Herts.

CUBA
C. B. Stevens & Co., Havana.

CALIFORNIA
Paul Bachert, Acton.
California Lumber & Milling Co., San Francisco.

COLORADO
R. C. Aikin, Loveland.
Arkansas Valley Honey Producers' Association, Rocky Ford.
Colorado Honey Producers' Association, Denver.
Fruit Growers' Association, Grand Junction, Robert Halley, Montrose.

ILLINOIS
Dadant & Sons, Hamilton
York Honey and Bee Supply Co., 141 and 143 Ontario St., Chicago.

INDIANA
C. M. Scott & Co., Indianapolis.

IOWA
Adam A. Clarke, Le Mars.
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A. G. Woodman, Grand Rapids.

MINNESOTA
Wisconsin Lumber Co., Faribault.

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E. T. Abbott, St. Joseph.

OHIO
Fred W. Muth Co., Cincinnati.
Norris & Anspach, Kenton.

PENNSYLVANIA
Cleaver & Greene, Troy.

TEXAS
Southwestern Bee Co., 438 W. Houston St., San Antonio.

UTAH
Fred Foulger & Sons, Ogden.

WASHINGTON
Lilly, Bogardus & Co., Seattle.

G. B. LEWIS CO. Bee-Keepers' Supplies **Watertown, Wis.**

American Bee Journal

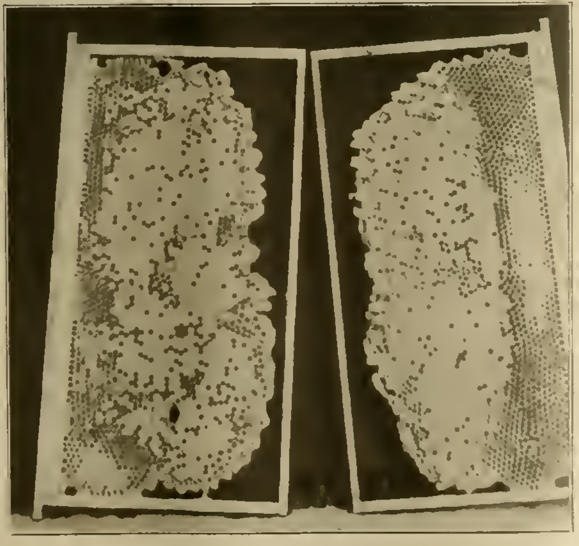
45th Year CHICAGO, ILL., AUGUST 3, 1905 No. 31

Some 4th of July "Kodaks" Taken at Dr. Miller's

(See page 534)

Dr. Miller with Bee Hat and Veil, also Record-Book—before going to the apiary

"Mother" Wilson—Dr. Miller's Beloved Mother-in-Law



Brood-Combs with 119 Queen-Cells—Started by Dr. Miller's Cyprian Colony

Dr. Miller Holding His Yearling Clydesdale, "Roderick"

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY

334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec05" on your label shows that it is paid to the end of December, 1904.

SUBSCRIPTION RECEIPTS.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows that the money has been received and credited.

ADVERTISING RATES will be given upon application.

National Bee-Keepers' Association

Objects of the Association

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00

General Manager and Treasurer—
N. E. FRANCE, Platteville, Wis.

☞ If more convenient, Dues may be sent to the publishers of the American Bee Journal.

The Honey-Producers' League

(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

MEMBERSHIP DUES

1. Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.
2. Any honey-dealer, bee-supply dealer, bee-supply manufacturer, bee-paper publisher, or any other firm or individual, may become a member on the annual payment of a fee of $10, increased by one-fifth of one (1) percent of his or its capital used in the allied interests of bee-keeping.

GEORGE W. YORK, Manager,
334 Dearborn St., CHICAGO, ILL.

Italian Queen-Bee Free as a Premium

To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us ONE NEW subscription with $1.00 for the Bee Journal a year. Now is the time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.

HONEY-JARS.

For a limited time we offer No.25 Honey-Jars, porcelain cover, metal screw cap, holding one pound of honey net, one gross in case complete in 5-gross lots, $4.00 per gross; less quantities, $4.50 per gross, f o.b. New York. If you want to secure some, let us know at once.

HILDRETH & SEGELKEN,
265 & 267 GREENWICH ST., NEW YORK, N. Y.
11Atf Please mention the Bee Journal.

IN THE HEART OF MICHIGAN

Within a hundred miles of me are over ¾ of the bee-keepers of Michigan. I am on the Pere Marquette R.R., which completely covers this region. Root's Goods, Factory Prices, Prompt Service, Low Freight. Send for Catalog.

GEORGE E. HILTON,
12A182 FREMONT, MICH.
Please mention Bee Journal when writing.

"If Goods are wanted Quick, send to Pouder"

BEE-SUPPLIES

Root's Goods at Root's Prices

Everything used by Bee-Keepers.
POUDER'S HONEY-JARS. Prompt Service.
Low Freight Rates. ∴ ∴ ∴ Catalog Free.

Hoosier Strain Italian Queen-Bees by Return Mail

Untested Queen	$ .75	Select Breeding Queen	$5.00
Select Untested Queen	1.00	Best Imported Queen	5.00
Tested Queen	1.00	Fair Imported Queen	3.00
Select Tested Queen	2.00		

WALTER S. POUDER,
513-515 Massachusetts Ave., INDIANAPOLIS, IND.

Millions of Sections
Shipping-Cases TONS of COMB FOUNDATION

Abundance of Bee-Smokers, Bee-Veils, Bee-Escapes, Bee-Hives, etc. Everything the bee-keeper needs. The best goods made. Lewis' Goods in Indianapolis at Factory Prices. Orders received in the morning shipped same day. FINE ITALIAN QUEENS mailed promptly from our breeder, here in the city. Untested, 75c; Select Untested, $1.00; Tested, $1.00; Select Tested, $2.00.

C. M. SCOTT & CO. 1004 EAST WASH. STREET
INDIANAPOLIS, IND.

N.B.—A Porter Bee-Escape, or its equivalent, FREE with first order, if you say where you saw this ad.
Please mention Bee Journal when writing.

LEWIS' SECTIONS,
SHIPPING-CASES.

—AND A FULL LINE OF—

BEE-SUPPLIES BY RETURN FREIGHT OR EXPRESS. SEND TO

H. M. ARND, Manager.

York Honey AND BEE SUPPLY Co.

141 & 143 Ontario Street, CHICAGO, ILL.

(5 short blocks north of the C. & N. W. Ry. Passenger Station, using the Wells St. Cable Line from center of city to Ontario St.)

Long Distance Telephone—North 1559

Catalog and prices on Honey on application. If you want **Good Goods at Factory Prices and Prompt Shipment,** send your orders, or call on us.

BEESWAX WANTED—28c cash, or 30c when taking Bee-Supplies in exchange —delivered here.

Please Mention the American Bee Journal when writing Advertisers

"DADANT'S FOUNDATION"

IT EXCELS.

* * *

WE GUARANTEE SATISFACTION.

* * *

BEE-SUPPLIES

OF ALL KINDS.

* * *

Beeswax Wanted at all Times.

* * *

DADANT & SONS, Hamilton, Ill.

STANDARD BRED QUEENS.

BUCKEYE STRAIN RED CLOVER, GOLDEN ITALIANS

By Return Mail. Safe Arrival Guaranteed.

PRICES	ONE	SIX	TWELVE
Untested	$0.75	$4.00	$7.50
Select Untested	1.00	5.00	9.00
Tested	1.50	8.00	15.00
Select Tested	2.00	10.00	18.00

Select Breeders, each $3.00
Two-frame Nucleus and Red Clover Queen 3.00

THE FRED W. MUTH CO.,
No. 51 WALNUT ST., CINCINNATI, OHIO.

We Sell Root's Goods in Michigan
Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. **Beeswax Wanted for Cash.**

M. H. HUNT & SON,
Bell Branch, Wayne Co., Mich

Please mention Bee Journal when writing.

VIRGINIA QUEENS Italian Queens secured by a cross, and years of careful selection from red-clover queens and superior stock obtained from W. Z Hutchinson. Untested queens, 75c; after June 15, 60c; tested queens, $1.00; after June 15, 75c; selected tested queens, $1 25; after June 15, $1.00. Write postal card for circular. **CHAS. KOEPPEN,**
17A26t Fredericksburg, Va.

Bee-Supplies!

We carry a large stock and greatest variety of everything needed in the Apiary, assuring best goods at lowest prices, and prompt shipments. We want every bee-keeper to have our **Free Illustrated Catalog**, and read description of Alternating Hives, Massie Hives, etc. Write at once for Catalog, either English or German language.

KRETCHMER MFG. CO., Red Oak, Iowa.

—AGENCIES—

Trester Supply Co., Lincoln, Neb.
Shugart & Ouren, Council Bluffs, Iowa.
Fulton & Ford, Garden City, Kansas.
I. H. Myers, Lamar, Colo.
Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex.

FINE QUEENS

By Return Mail. From my 3 and 5 banded long-tongued Italians. Tested, $1; warranted tested, 75c; untested, 60c; no disease. I guarantee all Queens perfect, to arrive safely, and to give reasonable satisfaction. I have pleased others and can please you. May I ask for a trial order?

CHAS. M. DARROW
23Atf R. F.D. No. 1. MILO, MO.

QUEENS

◆

We have secured the services of one of the best Queen specialists in the U. S. Over 20 years' experience rearing Queens. Our Yard is stocked with select breeders from the best yards in America, and can send Queens by return mail.

◆

Prices to Sept. 1, 1905:

Untested Queens	$ .75
Select Untested Queens	1.00
Tested Queens	1.50
Select Tested Queens	2.50

GRIGGS BROS.
521 Monroe Street,
TOLEDO, - OHIO.

Please mention Bee Journal when writing.

QUEENS

August is the time to requeen the apiary. It pays to have the best possible stock. Root's Red Clover Strain is famous the world over for its many points of excellence. A young, vigorous queen introduced now will bring the colony up to the best possible condition for wintering. Queens, too, now are the cheapest, and prompt delivery is made.

We are in an unequalled position to fill your queen orders. Having eleven apiaries, approximately 900 hives, with hundreds of Baby Nuclei, we are in condition to take care of all orders sent.

Table of Prices

Regular Italian Queens

Untested queens	$ 75
Select untested queens	1 00
Tested queens	1 50
Select tested queens	2 50

Red-Clover and Other Strains of Italian Queens Reared in the Root Co's Apiaries

Untested queen	$1 00
Select untested queen	1 25
Tested queen	2 00
Select tested queen	3 00
Breeding queen	5 00
Select breeding queens	7 50
Extra select breeding queens, 1 year old	10 00

Imported Queens

Fair imported queens	$3 00
Best imported queens	5 00

Caucasian Queens

We can spare a limited number of imported Caucasian queens, received direct from the best breeders in Caucasus. Prices as follows:

Extra select Caucasian imported queens	$15 00
Select Caucasian imported queen	10 00
Extra select untested Caucasian-Italian queens, from Caucasian mothers mated with Italian drones	3 00
Select do	2 00

Orders filled in rotation. Delivery begins about July 15.

Prices of Nuclei

One-frame nucleus, without queen	$2 00
Two-frame nucleus, without queen	3 00
Three-frame nucleus, without queen	3 50
One colony of bees in 8-frame Dovetailed hive, no queen	7 50

* * *

"I received my bees and queen and I am well pleased with them. The queen is a beauty, and the bees easy to handle. They were to work in ten minutes after I put them in the hive."—E. T. Mills, Ills., May 15, 1905.

* * *

"I beg to acknowledge receipt of five fine queens, and, as they got here in good shape, beg to thank you for prompt and successful delivery. Without further advice, I am yours truly,

"Frederico Somerford, Cuba, June 13, 1905."

* * *

"I am pleased to say that the bees are doing fine. I find eggs in every available cell. I also found the queen, and it is entirely satisfactory."—W. H. Durst, Ohio, July 20, 1905.

Send for complete price-list

CASES

Don't allow your comb honey to be sold at low prices on account of poor **Shipping-Cases.** Put your crop into **Root's No-Drip Cases,** and it will reach the market in perfect condition and bring the highest prices. Our cases are made of selected basswood, with 2 or 3 inch glass front, which shows off the honey to the best possible advantage. Below is a condensed price-list. Complete prices and particulars are found in our General Catalog. Write for it.

Shipping-Cases. Name and Size of Case.	Nailed each.	Price complete including 3-in. glass one side, nails and paper, in flat. 1	10	100	With 2 in glass instead of 3—per 100.	Without the glass, per 100.
12-in. 4-row for 4¼ section	30	25	2 00	$18 00	$17 00	$16 00
10-in. 4-row " "	30	25	2 00	17 00	16 00	15 00
12-in. 2-row " "	20	15	1 30	11 00	10 50	10 00
10-in. 2-row " "	20	15	1 20	10 50	10 00	9 50
16-in. 2-row " "	25	18	1 50	12 00	11 50	11 00
8-in. 3-row " "	20	15	1 30	11 50	10 75	10 00
6¼-in. 3-row " "	20	15	1 20	11 00	10 25	9 50
7⅛-in. 4-row for 4x5 "	30	22	1 80	16 00		14 00
7⅛-in. 3-row " "	25	20	1 40	12 00		10 50
9¼-in. 4-row for 3⅝x5 "	30	22	1 80	16 00		14 00
6¼-in. 3-row " "	25	20	1 40	11 50		10 00

5-Gallon Square Cans

These are the favorite packages for shipping Extracted Honey to the market. There can be no shrinkage and consequent leaking; no taint to the honey from wood, as is so frequently the case with kegs and barrels. The cans being square economize space, and are easily handled. This package is almost exclusively used in the West. They take 4th class freight-rate.

PRICE LIST OF SQUARE CANS.

No. in a box.	Capacity of each can in gallons,	in honey.	Price of 1 box.	10 bxs.	Wt. of 1 box.
1	5-gal. can boxed	60 lbs.	$ 55	$ 5 00	10 lbs.
2	5-gal. "	60 "	85	8 00	15 "
10	1-gal. "	12 "	1 50	14 00	20 "
12	½-gal. "	6 "	1 50	14 00	20 "
24	¼-gal. "	3 "	2 40	23 00	25 "
100	1-gal. "	12 "	11 00	105 00	110 "
100	½-gal. "	6 "	9 00	85 00	80 "
100	¼-gal. "	3 "	7 00	65 00	60 "

"The consignment of bee-material received to-day. Your promptness in filling orders is remarkable, especially when the circumstances are considered. I am very well satisfied with the goods and your dealing. I take pleasure in having introduced Root's Goods into this neighborhood."—Rev. Wm. Engelke, Iowa, May 5, 1905.

* * *

"I do not want anything set up, as I would rather set the hives up myself, besides it is a pleasure to put Root's hives and fixtures together."—John L. Funk, Ohio, Jan. 11, 1905.

* * *

"I desire to thank you for being so prompt in sending the sections I ordered from you. They came in less time than it takes to tell it."—L. G. Reed, Ohio, July 10, 1905.

Send for complete price-list

The A. I. Root Company

MEDINA, OHIO

◆

BRANCHES

Chicago, 144 E. Erie St. Philadelphia, 10 Vine St. New York, 44 Vesey St.

Established in 1861
THE AMERICAN
BEE JOURNAL
Oldest Bee-Paper in America

(Entered at the Post-Office at Chicago as Second-Class Mail-Matter)

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor
CHICAGO, ILL., AUGUST 3, 1905
Vol. XLV—No. 31

Editorial Notes and Comments

The Fourth Double Number

It will be noticed that this is another double number—32 pages—making the fourth of the kind so far this year. It will take several minutes longer to read it all, but it will pay to do it. We hope it will be enjoyed also.

Marketing Honey

This copy of the American Bee Journal might almost be called a special number on the very important topic of marketing honey. Results of actual experience are given, and if minutely followed by others similar successes should be attained. We bespeak a careful reading of all in this issue on marketing honey, as well as the other contents.

Shipping Extracted Honey

Usually extracted honey is shipped with no loss whatever. Perhaps a large majority of the producers put it into the common 5-gallon or 60-pound tin can, two cans in a wooden box. Practically all the Western extracted honey is thus put up for market.

In some of the Middle States, notably Wisconsin and certain parts of Illinois, and even in New York State, much of the extracted honey is put into barrels. Where the right kind of barrels can be had, and if the producer understands the use of barrels for such purposes, they are all right. But please excuse us from handling honey in barrels, especially if it is to be held in storage many months before being sold to the consumer who will use it very soon.

Grading Comb Honey for Market

Few bee-keepers agree as to the grading of comb honey. This doubtless is the result of every bee-keeper seeming to think that his own honey is always the fanciest kind of fancy honey. At least that was our experience when we were dealing somewhat extensively in honey. Nearly every shipper that we dealt with thought he should have the top-of-the-market price for his honey, no matter in what grade it deserved to be placed.

We had some interesting experiences that we could give if it were necessary. But we remember several instances where half-filled and half-sealed sections were put in back of the row of nice ones next to the glass front. Also where dark and "measley" looking sections of honey were mixed in with the nice white ones that invariably veneered the case.

Let us say it in the kindest way possible, that we are certain it will pay even bee-keepers to be straight and honest. It never pays to be otherwise, in the long run. It may be possible to work off a gold-brick once, but hardly the second time—not on the same person, at least.

Were we to ship honey to a distant market we would send only the best grades, and either eat the poorer honey or sell it in the home market at a little lower price, perhaps, to people who would just as soon have it as the finer-looking honey.

We would not put our name and address on the sections or cases of honey unless we had the consent of the purchaser to do so. We might, however, put our initials on the outside of all the cases, so that the receiver should not get it mixed with some other shipment of honey.

Shipping Comb Honey

Some time ago we promised to publish detailed directions for shipping comb honey safely. As the time to put such information into practical use is now here, we present not only the result of our own experience, but that of some others as well.

For a number of years we were in the honey business rather extensively, and every shipment of comb honey that was either sent out or received at our store, if packed according to our instructions, carried safely.

In the first place, the comb honey should be put in either 12-pound or 24-pound shipping-*cases*. Then say 9 of the 12-pound or 6 of the 24-pound cases packed in a shipping-crate, first putting in the bottom of the crate a thick bed of straw or hay, or excelsior. This will act as a cushion under the cases of honey. The crate should then be enclosed on top by nailing on say two or three strips of boards, on which must be marked in large, plain letters—

COMB HONEY.
HANDLE WITH CARE.

Also coming even with the upper edge of each side of the crate we would nail on a piece of board, say an inch thick by 3 or 4 inches wide, and extending beyond the ends of the crate about 5 inches. These will serve as handles for the freight men to take hold of when moving the crate either on or off the cars.

As said before, whenever the foregoing instructions as to preparing comb honey for shipment were implicitly followed, the honey arrived at its destination in perfect condition. It seems such a pity to have a lot of nice comb honey arrive in a broken or smashed-up condition, and all for the lack of proper packing before shipping. We trust that readers of the American Bee Journal will never be called upon to suffer any loss when sending their comb honey to a distant market.

"Sell Your Honey Early"

Editor Root gives in Gleanings the following good advice as to selling honey:

> "As we have said before in these columns we say again, sell your honey early. New honey, right off the hives, always has the advantage. Consumers learn to expect new honey just as they expect new maple molasses. It is generally poor policy to hold back, waiting for better prices. Anyhow, manage to get it sold before the holidays—the sooner the better, as a rule."

Usually, higher prices rule for a *very few* months after the first honey comes on the market; after that the tendency in prices has been to drop a little. So Mr. Root's advice is all right, taken one season with another. Occasionally it may be the case that prices of honey will go up in a few months after the new crop is put on the market, but such experience is quite exceptional, we believe.

Lava Soap for Removing Propolis

This has been highly extolled, but J. A. Green, in Gleanings in Bee Culture, reported it a failure with him. Editor Root, having previously used it successfully, finally struck a kind of propolis that was proof against lava soap. He says:

> "To-day I got my hands pretty badly smeared up with a yellowish-brown propolis, 'and now,' said I, 'is a good time to test the lava soap.' It had absolutely no effect on the propolis. I rubbed and scrubbed; but the more I lathered and soaped the more it seemed to stick. I then went to the benzine-can, sopped my hands in the liquid, and soon had the satisfaction of seeing the propolis roll off. A second application of the soap made my hands nice and clean."

He thinks this "gummy, yellowish-brown stuff" must first be treated with gasoline, alcohol, or the like.

Miscellaneous News Items

Fourth of July with Dr. Miller.—Again it was the happy privilege of ye editor and wife to spend Fourth of July with Dr. C. C. Miller and his family. Doubtless the great majority of our readers know that Dr. Miller's family usually comprises, besides himself, Mrs. Miller, her sister (Miss Emma M. Wilson), and their beloved mother, Mrs. Wilson. "Mother" Wilson will be 87 years of age her next birthday. The presence of this dear old saint would be a benediction in any home. Although the day was cloudy and rainy, we persuaded her to sit on the porch, holding a tray of four boxes of just-picked luscious strawberries, in order to "take her picture." The result is shown on the first page.

Dr. Miller has two apiaries this season—one at home, having 125 colonies and nuclei, and an out-apiary (3 miles away) with 100 colonies. All are run for comb honey. He began with 178 colonies in the spring.

In early spring he and his efficient assistant, Miss Wilson, had prepared 26,000 sections, each with a top and a bottom starter of comb foundation, and all put in supers ready to place on the hives when needed. The prospect was, July 4, that even more sections might be required, should white clover continue to yield as it had in previous best seasons.

(From the Northwest) TWO VIEWS OF DR. MILLER'S HOME APIARY (From the Southwest)

Dr. Miller believes in rearing all the queens for requeening his apiary and for increase, from the queen whose bees produced the largest quantity of honey a previous season. As it happened, that queen this time was a hybrid. But he is requeening and queening the increase made by the nucleus method with queens reared from the one mentioned.

He is using what proves to be a very rapid method of having queen-cells completed for the queen-nursery. He removed the queen from the only Cyprian colony he has, and then gave that queenless colony two frames of eggs and young larvæ from the banner colony. In due time the Cyprian colony had those two combs looking like the picture on the first page. There were 45 queen-cells on one of them, and 74 on the other. It was really laughable to see how the bees of that "Cyp" colony had humped themselves in order to provide a queen or two for themselves! Then at the proper time Dr. Miller simply cuts off the perfected cells and puts them in the queen-nursery, which is placed over another colony for hatching. As the virgin queens then emerge, they are introduced to nuclei previously formed, and awaiting the reception of the hybrid queens reared by the fiery-tempered Cyprian nurses. It is all a very successful procedure.

Dr. Miller keeps a book record of each colony of his apiaries. The home yard is numbered beginning with 1, while the out-yard begins with a higher number. One book contains the records of both apiaries for the season. Each year requires a new book. Every detail of each colony, and also of everything connected with both apiaries, is carefully noted down. Then at the end of the season it is easy to total the results, not only of each colony, but of each apiary.

A lead-pencil is attached to the book with a string, and notations are made at each hive as the work proceeds. Of course, there is danger of forgetting to take the book along to the apiary when starting, but in the case of the home apiary such forgetfulness is not very annoying, as it is located only a few rods from the home. And when starting for the out-apiary the record-book, of course, is about the first thing thought of as necessary to take along.

There is great advantage in this record-book. Dr. Miller can, before starting from the house in the morning, look over the colony records in his book, and see in a few minutes nearly all the work needed to be done that whole day. In fact, the condition of each colony in his apiaries is noted in the book. He can almost at once see just what should be done next—the most important thing that requires prompt attention—before going to the apiary for personal examination. And by referring to his record-books, he can tell just what he has done each year with bees during the past two score years or more. In the picture shown, the Doctor is sitting in a rocking-chair on the porch, with record-book open on his lap, ready to find out just what nuclei need virgin queens. After learning that, we proceeded to the apiary and introduced a number of them.

He is also making trial of the dual method of introducing queens. Suppose a nucleus contains a virgin queen. Three or more days before she is likely to be ready to lay, a second virgin is introduced. She is put in a cage something like the Miller introducing cage already on the market, but with no provision for the bees to release her by eating out the candy. Instead of that a little ball o candy is dropped right into the cage, and the virgin put in with it, then the stopper is put in. Just as soon as virgin No. 1 becomes a laying queen she is removed from the nucleus and used wherever needed. On the same visit when No. 1 is removed, No. 2 is let out of the cage, and at the same time virgin No. 3 is put caged into the nucleus. Then when No. 2 is laying she is taken out, No. 3 is released and No. 4 is caged, and so on. This plan has been successfully used by Editor Root, and saves the usual time of introducing a fresh virgin.

Dr. Miller likes horses also. He drives a spirited team of mares in a two-seated carriage. If he were a young man we should fear his taking to race-horses. But as he is now about 2 months past 74 years, he will not likely be "carried away" with anything faster in the horse-flesh line than he now owns. One of his mares had a colt a year ago in May. On July 4 Dr. Miller haltered it and led it out on the lawn to have its picture taken. The result is seen. It is three-quarters Clydesdale stock, and promises to grow into a fine horse of a beautiful light bay color. The Doctor will soon be harnessing Roderick and likely be driving him a little by the time he is two years old.

We must not forget to mention the delicious strawberries that are found on Dr. Miller's place, which, with their "home grown" cream, make such a rich feast.

But one day is all too short with Dr. Miller and his happy family. It's almost a continuous bee-convention from morn till night, for aside from the time spent in the apiary it was mostly bee-talk.

Dr. Miller is probably the most prolific writer on bees in all the world. And his writing is so original and entertaining that it charms, entertains and instructs those who are privileged to read it. But his conversation is just as pleasing, and withal he is so cheerful and young-hearted that to be with him even a whole day seems all too brief a time. We count it a thing to be greatly prized, that we have been permitted to know Dr. Miller so intimately, and to be able to present each week to our readers something from his ready pen, drawn from years of practical experience with bees. We are sure all will join with us in wishing him yet many, many years of health and happiness ere he shall be called to exchange his earthly home for the one "not made with hands, eternal in the Heavens."

MISS WILSON READY FOR BEE-WORK

◆

The San Antonio Convention of the National Bee-Keepers' Association meets Oct. 30, 31, and Nov. 1. Oct. 28 will be "Bee-Keepers' Day" at the International Fair to be held at that time in San Antonio. We have consulted several leading railroad companies here in Chicago, and they tell us that no special rates have as yet been decided on that bee-keepers in the North can take advantage of. They think there will be low rates in force at the time of the convention, and that they will be announced with the dates as soon as known. We are hoping to get up a carload of bee-keepers to start from Chicago in time to take in the "Bee-Keepers' Day" at the Fair, and then the National Convention. As soon as we can get any definite information concerning transportation we will place it before our readers, and trust that as many as can do so will arrange to go together from Chicago.

◆

They Leave the "Wax."—"Your government," said the foreigner, "is a failure. Everywhere your institutions are honeycombed with graft."

"Oh," replied the hopeful American, "it isn't as bad as you think. The grafters have been public-spirited enough in most cases to leave the wax."

◆

T. W. Bryan, somewhere in Illinois, is running a small advertisement in farm papers offering, for $1.00, "The Art of Attracting and Catching Swarms of Bees. Copyrighted June 6, 1904." We can hardly believe that any of our readers would be willing to pay $1.00 for what they can easily find out in any one of the standard books on bee-keeping, besides a thousand and one other things of value. Mr. Lisle Schneider, of Iowa, has kindly sent us a copy of Mr. Bryan's advertisement, taken from some farm paper. We are always glad to have our readers send us anything apiarian that they may find in publications that we would likely not see otherwise.

◆

W. H. H. Stewart, of Whiteside Co., Ill., gave us a brief call last week. He is a bee-keeper of many years' experience, and usually attends the annual meetings of the Chicago-Northwestern Association.

◆

Ira Barber, of St. Lawrence Co., N. Y., writing us July 27, said:

"There is a large crop of white clover honey in this locality, and the honey season is over."

Some Expert Opinion

More Honey from Colony and One Swarm, or from Colony and No Swarm ?

Ques. 28—*Which will give you more honey, a colony with its one swarm, or the same colony without any swarming?*

Mrs. J. M. Null (Mo.)—Usually the former.

G. M. Doolittle (N. Y.)—Without any swarming.

Morgan Bros. (S. Dak.)—The colony with its one swarm.

R. C. Aikin (Colo.)—One year with another, the non-swarmer.

E. Whitcomb (Nebr.)—A colony without any swarming, every time.

N. E. France (Wis.)—Big colonies pay best. For comb honey, "shook" swarms.

Jas. A. Stone (Ill.)—My experience has usually been in favor of the one not swarming.

Adrian Getaz (Tenn.)—The one that does not swarm, by a long way. At least in this locality.

Eugene Secor (Iowa)—I can't say positively, but I prefer the colony that has not swarmed.

Dr. J. P. H. Brown (Ga.)—Conditions being the same, such as the honey-flow, the colony without any swarming.

R. L. Taylor (Mich.)—I like to have my bees swarm once, and think I get more honey that way, besides having an extra colony.

J. M. Hambaugh (Calif.)—A great deal depends. With a prolonged honey-flow of two or three months, the colony "with its swarm."

Dr. C. C. Miller (Ill.)—In this locality the one colony without any swarming. With a flow sufficiently long the reverse might be the case.

Rev. M. Mahin (Ind.)—I can get more honey from a colony that I do not allow to swarm. Something depends, perhaps, upon the season.

J. A. Green (Colo.)—I have not been in this State long enough to feel sure. In Illinois, the one that did not swarm, other things being equal.

Prof. A. J. Cook (Calif.)—It depends. I think usually it is wisest to permit one swarm when the bees so desire. I would always stop with the one.

Arthur C. Miller (R. I.)—It depends upon the man, and upon the time of swarm and honey-flow. Usually the non-swarming colony is the more profitable.

S. T. Pettit (Ont.)—Where the flow is short and sharp, without swarming will give most. Where the flow runs over several months, the colony with its one swarm will win.

C. P. Dadant (Ill.)—The colony if it does not swarm, unless the crop happens to come six weeks or two months after swarming, when two colonies would, of course, do better than one.

P. H. Elwood (N. Y.)—With us the colony without swarming. Where there is a later honey-flow, *i. e.*, where the late honey-flow can be counted on, undoubtedly the two would give more.

E. D. Townsend (Mich.)—I take the question to mean *surplus* honey after the one or two colonies are allowed their regular amount for winter stores. With our Kalkaska bees, where the season opens early in June, and lasts during five weeks, usually, with no later flow, the colony without any swarming. Here in Mecosto County, where the early flow is about the same, followed with a buckwheat and aster flow, the difference is not as great. Still, I think even here the colony without any swarm.

C. H. Dibbern (Ill.)—I would get more section honey, or extracted honey, as surplus from the colony that did not swarm. If the total amount gathered is meant, I will have to admit, *a la* Dr. Miller, "don't know."

Wm. McEvoy (Ont.)—Where the season is *short*, and ends when the colony is done, then the colony without any swarming. In localities where the season is long, and much buckwheat is grown, then from the colony with its one swarm.

O. O. Poppleton (Fla.)—If the honey-flow occurs early in the season, and is short and heavy, the one colony will probably give most honey; but if the flow comes late, or is long-drawn-out in time, the 2 colonies will probably do best.

G. W. Demaree (Ky.)—It depends upon the length of the summer honey season, and the time the prime swarm issues. If the swarm issues at the right time the parent colony and its issue—if properly managed—will beat any non-swarming colony.

E. S. Lovesy (Utah)—This is rather a hard question to answer. If the colony is weak it will not do much in either case, but with a strong colony, as a rule, it would swarm unless it was divided. Personally, I could produce more honey by the latter method.

C. Davenport (Minn.)—This depends upon a number of things or conditions, as, for instance, length of flow, what time they swarm, and how the swarm and the parent colony are handled. I can "swarm" any colony artificially so as to get more honey, either comb or extracted, than if they swarmed naturally, or did not swarm.

E. E. Hasty (Ohio)—Sometimes and sometimes—very often one way and very often the other. With the early harvest a semi-failure, and a good, late yield, the two would do much the better. With those two conditions put *vice versa*, the one would do much the better. Probably the last state of things is rather the more common of the two.

L. Stachelhausen (Tex.)—In this locality in some years a colony with its one swarm gives nearly twice as much honey as the same colony without swarming. In dry years, with an early honey-flow, a colony without swarming may gather quite an amount of honey. If the same colony had swarmed during this honey-flow we would get no honey crop at all.

Honey Circular for Shipping-Cases

The Honey-Producers' League has prepared, and succeeded in getting some of the leading bee-supply manufacturers to send out with their shipping-cases, a guarantee comb honey circular, intended to aid in dispelling the belief that comb honey is ever machine-made. Bee-keepers all know it is never so made, but on account of the general impression that it is, the League thought it would try to pass the truth along through the honey-dealers.

We trust that every bee-keeper who receives shipping-cases with the circulars will be sure to put one in every case just under the lid, so that whoever opens it will be compelled to sell it.

The G. B. Lewis Co. are putting the circulars in sealed envelops with printed directions on the outside, then including them with their shipping-cases in the flat.

Should any of our readers desire a supply of these guarantee comb honey circulars, we can furnish them, postpaid, at 10 cents per 50.

That our readers may see just how the comb honey circular reads, we give it below.

"Combed" and "Extracted"

DRY WEATHER AND COLOR OF HONEY.

I do not believe that dry weather affects the color of honey, except that in non-irrigated countries it is apt to lessen the yield, so that bees, in their search for honey, work on plants that ordinarily they would leave alone. The honey thus secured is apt to be darker and poorer in quality than what they get from ordinary sources. In the irrigated districts of Colorado and Utah, where alfalfa is grown, the air is extremely dry, though the ground may be well watered. When alfalfa honey is secured free from any admixture, it is water-white in color, and I have never seen anything to indicate that the weather had anything to do with the color. In this valley, though, it is but seldom that alfalfa honey is secured alone. An average of my honey, even excluding the fall honey, which is distinctly darker in color, is of a light golden tinge.—J. A. Green, in Gleanings

BANNER HONEY COUNTY OF NEW YORK.

Tompkins Co., so I understand, has the honor of being the banner honey county of New York. Its output was over 236,000 pounds, or, figured in cars, it would be between seven and eight. When it is remembered that that county is only about 20 miles across it either way, these figures are somewhat remarkable; but perhaps it will be better understood when it is known that the largest bee-keeper in the world, probably, at the present time, Mr. W. L. Coggshall, has something over 20 apiaries within its borders. There are other counties in the United States that will show a larger output of honey, but these counties are as large as some whole States in the East. I refer to Los Angeles, San Bernardino, and San Diego, in California. All these central counties in New York yield immense amounts of honey. The territory is already overstocked, and it would be useless for an outsider to try to squeeze in.—Gleanings.

To the Purchasers of this Honey

The producer of this Comb Honey, and also the undersigned, guarantee that the product in these sections or small frames was all made by honey-bees.

There is no such thing as manufactured comb honey. It never was made, and never can be, newspaper and magazine articles to the contrary. If any one says there is such a thing as manufactured comb honey on the market, just tell that person that the National Bee-Keepers' Association, an organization of over 2000 members, through its General Manager, N. E. France, of Platteville, Wis., will pay $1000 for proof of such machine-made combs filled with glucose or any other cheap syrup, and capped over by means of machinery without the aid of bees. Also, a corporation capitalized at $300,000, all paid in, has had for many years a standing offer of a like sum for the same so-called manufactured comb honey as described, and the offer is still good. In addition to this, the bee-expert, a life-long bee-keeper, now in the employ of the Department of Agriculture at Washington, has repeatedly, in government bulletins and in public addresses, denied the existence of any such product. For evidence of this fact, refer to the report of the Secretary of Agriculture for 1904, page 83; also to Farmers' Bulletin No. 59, for 1905, pages 32 and 34, also issued by the Department of Agriculture, entitled "Bee-Keeping," by Frank Benton.

It may be well to state that the basis for these comb-honey canards is possibly due to the fact that the flavor of honey in one locality may be very different from that of another; that when one tastes of a honey quite different in color and flavor from that which he used to eat on the old farm, he concludes it is adulterated or manufactured, especially if it be of poor quality. As a matter of fact, the comb honey from California is just as different from the same article produced in the Central and Eastern States as the fruits of that State are different from those in New England. In the same way, the honey from Texas differs very widely from that produced in Ohio, or honey from Florida from that in Texas. Some honeys, like that from buckwheat, are very dark; others are not only dark but ill-flavored, and should never be sent to market, but be sold to the baker or fed back to the bees for rearing young bees.

Two-thirds of the States in the Union have pure-food laws; and one may rest assured that, in all the States where such laws are in force, both honey in the comb and in the liquid condition, generally called "extracted," is and must be the genuine product of the hive.

The oft-repeated misstatements about adulterated honey and manufactured comb honey in the newspapers and magazines has made it necessary for The Honey-Producers' League to put out this statement, for the reason that the general public has come to believe that a large part of the honey on the market is adulterated or manufactured. If the dealer will join with the bee-keepers in helping to correct these monstrous lies, it will materially increase his sales of both comb and liquid honey.

The Honey Producers' League

GEORGE W. YORK, Manager
CHICAGO, ILL.

Dr. C. C. Miller, President, Marengo, Ill.
Geo. C. Lewis, Vice-President, Watertown, Wis.
W. Z. Hutchinson, Secretary, Flint, Mich.
A. L. Boyden, Treasurer, Medina, Ohio.

N. B.—*Do not store comb honey in a refrigerator, cold storage, or cellar.* These are the very worst places you can put it. It should *always* be kept in the warmest and dryest room you have. It is advisable to keep liquid or extracted honey in the same warm, dry place.

Contributed Special Articles

Comb Honey in the Home Market

BY "ILLINOIS"

Twenty-five years ago a man with 10 colonies of bees, kept in the old-fashioned way, could supply our little town with honey; now we need about a ton to each thousand people to supply the home market.

Then honey was sold by the pound, and in a small way; now we sell to consumers by the case, and if bee-keepers in their home markets would put up their comb honey in small cases of not more than 10 or 12 pounds each, and quote and sell it that way, their market would be improved.

We have told people all about honey as a medicine, and so the general public buys honey about as freely as bee-keepers buy pills.

Sell a woman a section of honey and tell her how good it is for the croup, mixed with lemon-juice, and she is likely to put it away somewhere until the baby has the croup, and by that time the honey may be in a condition either to kill or cure—to kill the baby, or cure it of its love of honey for good and all.

What we want is, people to use honey as an article of food, so sell to them by the case, and they will eat it by the case, and want more.

Put the retail price per case so that you can sell to grocerymen at market rates, and so that they can make a fair profit if they sell by the case, and a larger one when they sell by the section, and let them supply the demand for less than a case. You and your grocer will then be good friends, and can work together.

It is an advantage to put your name on your honey in your home market, and also use a stamp with "Keep Comb Honey Where it Will Be Dry and Warm," or something to that effect.

One thing I must say, and that is, that people become educated in regard to the quality of honey very fast, and so first, last, and all the time, *quality* must not be lost sight of. Keep all unfinished, leaky and broken sections out; and don't try to convince people that what they don't like is all right.

Good salesmen, and much talk, will not sell poor and off grades of honey a second time; and if I and my location can not produce honey that will sell itself the second time, I would better quit, for I will have to do so in the end.

My experience in city markets is small, and I know that ignorance in regard to honey prevails, yet it would seem as if methods which are successful among a few thousand people ought to be so among many, and I fully believe that what we most need is men who will get honey of the right quality to the eaters of it, in a clean and attractive condition, and then The Honey-Producers' League, which is a long step in the right direction, and other means of education, can do the rest.

I sometimes wonder if a "Honey-Eaters' League" should not be organized to educate a large proportion of our bee-keepers in the handling and care of their bees and honey.

The marketing of extracted honey is quite different from that of comb, but the same principles apply to both—small quantities used as a luxury, large quantities as food.

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Selling and Shipping Honey

BY F. GREINER

If every lover of honey had a fair opportunity to obtain all he wanted at a reasonable price it would not be necessary to hold over a part of our crop. We bee-keepers do not reach consumers—there lies the trouble. We must aim to distribute the honey we produce over a larger territory, *each one of us.*

If we find it necessary to place our crop in the hands of commission men, it is not advisable to ship it all to one firm. It may work all right, and it may not. The practice is altogether too hazardous. One friend writes me from a neighboring county, saying he saw my honey at a certain house in Boston, and went home and shipped his 7000 pounds to the same firm last fall to be sold on commission, but it seems he has not yet received his money for it; the honey is not yet sold.

Another friend in my own town shipped the larger portion of his crop—all the white honey—to the same firm, and has not yet had his pay. My own honey was sold to the firm before it went, at a fair price. The honey the two friends shipped would have netted more than what I had received, had it been sold at that time. But it seems to me the firm could not handle so large an amount of honey, and made no effort to find an outlet somewhere else. They allowed the time when it might have been sold at a good price to pass by, and now it is on their hands and the producers have no money to use. The chances are they will have to wait till next fall, and then take a small price.

It always has seemed to me a poor policy to ship a large quantity of honey to one firm at one time, when it is to be handled on commission. I have always sent small lots—not over 400 or 500 pounds at one shipment. When that was sold I shipped more. I also tried different markets. In this way I received some cash right away, and I selected those markets for further consignments which gave me the quickest returns and best net prices. I never have been caught with comb honey on my hands when winter came on, following the plan as outlined.

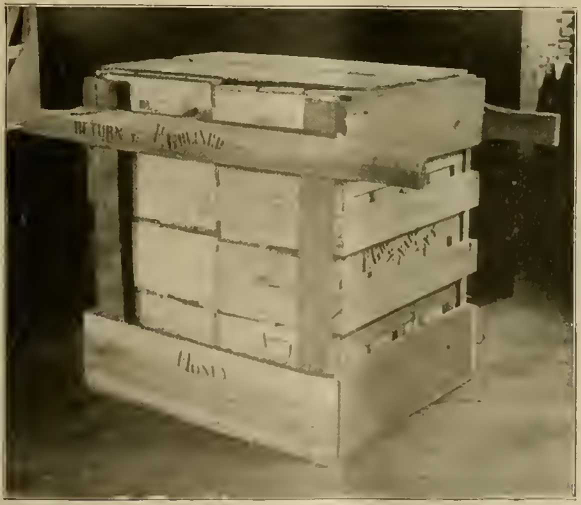
I want to sell for cash if possible, but I am never at a loss to know what to do with my honey if the cash buyer does not come around.

The firm to whom my two friends shipped their honey is all right. I have dealt with them for years, sold to them a number of times, but last fall they had too much on their hands, and should have so informed their shippers.

HOW BEE-KEEPERS OBTAIN LOW FREIGHT RATES BY COMBINING WITH FRUIT-GROWERS IN NEW YORK STATE.

The fruit-growers of this vicinity formed an association some years ago, having for its objects obtaining low rates from the railroad companies, and to oversee the shipping of the fruit, particularly grapes. The association hires a man to see to the loading, and another one is sent to Boston, where all the fruit is sent, to oversee the unloading. A great many dollars have thus been saved to the fruit-men yearly.

While originally the association was formed for the benefit of fruit-growers, concessions have been made to peach, plum and even apple growers. I have also shipped butter, eggs, chestnuts and honey in the same cars with the grapes without objections being raised by the railroads. The rate on all these products to Boston is but 35 cents per 1000 pounds, which I consider a low rate. The transit is quick and safe. Our own men and we ourselves handle the products. There is seldom any smashing. When our honey can be corded right in with the grapes (the grapes being in five-pound baskets) no better way can be devised; but I aim always to get my honey into the center of the car, the grape baskets thus forming a cushion on each end.



METHOD OF PACKING COMB HONEY FOR SHIPPING.

When honey must be shipped by way freight in small lots, to insure safety it should be put up in specially constructed crates, as shown in the picture herewith. They may be constructed on a different plan, but this, it seems to me, is the simplest. It is doubtful that any straw put under the honey, as is recommended, increases the safety or is a further guarantee against breakage. Ontario Co., N. Y.

Honey Results Not All in Management

BY DR. C. C. MILLER

I have read with much interest the article by my good friend, G. M Doolittle, page 453. Just a little bit hard not to feel envious because he can do 30 pounds better with a colony than I can, but I've concluded to be good and congratulate him. I want, however, to warn beginners not to conclude too hastily that the difference in the plan of management is solely responsible for the difference in yields.

Remember, I'm not discussing the point as to which management is better. I'm only saying that Mr. Doolittle's greater yield does not *prove* that he has the better plan. A number of things might play a part. With the same management, Mr. Doolittle might be more skilled and more careful in carrying out details. He might have better bees. He might have a better season; for seasons differ, and it may be that next year I shall have a better season than I've ever had before. (But I'm hardly expecting it.)

There's another item that probably makes more difference than all other things combined. Mr. Doolittle got one colony to store 66 pounds in three days. I can't do that. I never did it. I don't expect ever to do it. I haven't the basswood trees. I haven't some of the other things Mr. Doolittle has. I am in what is called a poor honey region, with white clover as the only source of surplus, although of late years cucumbers or something else seem to help out in the fall. So far as I know, Mr. Doolittle has as much white clover as I, but I think the greater part of his surplus comes from other things, basswood looming up as the greatest producer. Without basswood I don't think he could get 22 pounds a day. I think that's at least 12 pounds a day more than any colony ever stored for me, or could store from white clover.

It may do no harm to dream a little about what I might do if I could turn my bees loose on Mr. Doolittle's pasturage during the basswood harvest. It would be hardly reasonable to count on 12 pounds a day extra throughout the basswood season, but I suspect that if the bees of that best colony of mine had had the chance upon that basswood that gave Mr. Doolittle 22 pounds a day, they would not have ruptured any blood-vessels in storing 6 pounds a day more than they could on clover. If they had done that for a week it would have made a difference of 42 pounds, distancing Mr. Doolittle's best by 12 pounds.

Aside from advising beginners not to draw hasty conclusions, a moral of the lesson is not to be too hasty about settling in a place of poor pasturage, especially not to settle in a place with only one honey-plant for surplus, where the bottom falls out a good many years because of the failure of that one plant.

Most likely some one would like to ask why I settled in such a place. I didn't know any better. For years bee-keeping was an avocation, and by the time I decided to make it a vocation so many ties had bound me to the place that I couldn't break loose. Even now I sometimes dream that if an earthquake or something else should tear me loose from this "locality," so I could be free to form new ties elsewhere, I should begin to look for a bee-keeper's paradise just as soon as I could wipe away the tears enough to see clearly where I was alighting. McHenry Co., Ill.

The Honey-Producers' League and Section Honey

BY DR. G. BOHRER

On page 596 of Gleanings, Mr. Virgil Weaver states a truth which, in my opinion, should not be overlooked or ignored by The Honey-Producers' League. He says, "The section has done more harm to the comb honey market than all other agencies combined." He claims that the comb-honey lie was caused by section honey. I do not know just how nearly correct this statement is, but I do know that all who believe the artificial-honey and artificial-comb falsehood invariably point to the section as the chief support of their position.

If this embraced all the harm the section has done, we might hope that, in time, the masses would learn that there never was, in all time past, is not now, and probably never will be, such a thing as artificial comb honey. But the so-called pound sections, which seldom ever contain a pound of honey, cause many persons to let them severely alone, for the reason, as they very truthfully say, they do not weigh a pound, but are sold at pound prices, and that they do not propose to pay for a pound and accept from 1 to 4 ounces less than a pound.

If the section were consigned to eternal infamy, and comb honey in shallow-super frames substituted, and sold strictly by weight, very much more honey in the comb would meet with ready sale than is sold as matters are now.

I have made it a rule to sell section honey by the pound, and get 14 cents per pound for it, and I sell comb honey stored in shallow super or extracting frames at the same price, the honey being cut out of the frames, which makes of it what is known as "chunk honey." In this shape I am free to admit that it is short of much "cosmetic ornament," which is all that the section does for honey, by keeping the cell-cappings intact, as a rule, so that the honey does not escape from the cells and run over the comb surface and muss the section or shipping package. That is, in case the shipping package is not so roughly handled while in transit as to break the honey-combs. In such an event the dealer can not stand the loss, and must sell what does reach him in safety at a higher price, in order to save himself. Thus it will be seen that the consumer pays dearly for the useless ornament furnished by the section.

I suggest that The Honey-Producers' League advertise the so-called pound section as not a pound, and urge both honey-producer and honey-dealer to sell section honey by actual weight, and not by the piece and under the name of a pound at pound prices, when it is not a pound by perhaps several ounces.

In a brief period of time the masses will let the section honey severely alone, for they will soon learn it to be an expensive luxury, and will call it "dude honey," leaving out the term "pound section."

I am fully aware of the fact that it is claimed by our bee-papers that there is no such thing as a measurement for an exact pound section, which is true, but the term "pound" sticks to the section tighter than propolis, and serves the purpose of causing the public very largely to denounce it as a deception and a fraud. Lighter sales of honey are the natural and legitimate result. Most of the counters of our honey-dealers bear computing scales. Let them buy and sell honey by weight. If they refuse, let The Honey-Producers' League not only advertise to do so, but actually buy and sell by weight, and other dealers will be glad to follow suit.

In addition to this, advertise extensively the fact that bee-comb or beeswax is not at all digestible, and that in the extracted form honey is the most wholesome as food.

Also, labor incessantly for a national pure food law which will impose a severe penalty for adulterating honey with glucose, keep on nailing the artificial comb honey lie, and educate the masses to the extent of knowing that comb honey has never been manufactured by man. Rice Co., Kans.

Selling Honey in the Home Market

BY J. M. HOBBS

I will explain how I dispose of my honey in the home market. I sell nothing but comb honey, and have sold all I could produce for the last 14 years right in this city and vicinity. I get 12½ to 15 cents a pound, or a section.

I sell about 1,200 pounds or sections a year, and it is all sold by Dec. 1st. When the last pound is sold I have received the cash for every pound sold, each year, so far, and we keep some 150 to 200 colonies right in the city.

This is how I have done it: In the first place, I don't use any separators in the supers. I use the standard sections, which will weigh a pound, and I always make them clean and attractive. I never sell a case of honey that does not weigh 24 pounds net. My customers know this, and they know that they get from 4 to 6 pounds more from me than they do from those who use separators; and they know that no other man in this state sells a better grade of honey in the comb. They also know that I always give 16 ounces, or more, to the section, and that when they buy of those who use separators they seldom get over 14 ounces for a pound.

The most of the bee-keepers who use separators do not use them always for the reason they say, that is, to make the honey of a uniform appearance, but, as I have said before, it saves them 4 to 6 pounds to the case. Those who use separators for short weights also want as many supers as they can get in one season, therefore they cannot see a super remain on the hive a moment after it is capped. They want it off so another can be put on.

My customers have learned that unless honey is left on the bees until well ripened it is little better than sweetened water and will never be good honey no matter how white and fine it may look. This fad about looks does not deceive them into buying short weights and an inferior quality.

I always have been honest with my customers on all of these points, and they know it. They can tell my honey anywhere they see it, as my name is on every section and once I get a customer he gets for me his neighbor, and I sell most of them one-half case or 12 pounds at a time.

I also make light cases that hold 12 sections, and deliver the honey in them. The customer leaves the honey in them until spring, or till the honey is used up. I have a book in which I keep the names of the customers where I left the cases. I request them to save the cases for me, and I go around in the spring and gather them up.

Once you get a customer in this way, and deal honestly, you will gain others without any soliciting. This has been my experience, and I cannot supply my present demands. Last season I made 12 pounds a wholesale rate, and less 15 cents a pound.

To get a customer, and instead of losing him the next season have him come and bring one or two more with him, is the way to sell your honey in the home market. If one is honest this will work nicely, but if you must use separators in supers, you will have to order sections large enough to hold 16 ounces to the pound, for the 14-ounce pound is as dishonest as the grocer's 3-quart gallon of molasses, or 12-ounce sugar done up in a nice, little, dainty package, as M. A. Gill says on page 213.

The way to dispose of anything is to make it attractive, but in doing so do not use deception assisted by dishonesty. One can use care without dishonesty. One can put up a full pound as tastily as he can a 12-ounce pound, or a full quart can of honey as showy as one that is a little less.

If any one will follow out what I have said, and does not dispose of his honey in his home market it will be because he has a good deal more honey to sell than I do, or has less customers to supply. But once you get the confidence of the public for honest dealing, the rest is easy. Your last sale is always good seed sown.

Yankton Co., S. Dak.

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Honey Education for the Public

BY C. A. STARK

The widespread belief in the adulteration of comb honey is, to my mind, the cause of the low price and small demand for it.

To illustrate: I live in a small village and have an apiary. There are two groceries here that handle section honey bought from commission men in the city, yet in this small place I have never been able to supply the demand for my honey at 5 cents per pound advance over prices at grocers. Even the grocer pays me, when I let him have honey, my regular retail price in order to be able to furnish pure bees' honey to his best customers.

Last fall one of these grocers sent to my house to know if I had honey to sell. I sent word that I had sold all I cared to sell, wanting what I had left for family use. He sent back to say that his little son was sick, and wanted honey. Couldn't I spare him a pound? Of course that appeal could not be denied, so selecting a choice section of honey I carried it down to the store myself.

Almost the first thing that attracted my attention on entering the store was a case of fine looking honey. I was astonished; thought that perhaps there was some mistake. But on accepting the honey he remarked that he was particular what his children ate, and that the honey in the case was from the city, and for all he knew was made there in some factory! Right there I did some missionary work along the line of comb honey.

I have had persons try to buy honey of me right in those stores where nice section honey was on sale, and not getting it of me they would walk out without buying, because they doubted its being pure bees' honey.

Another time, one grocer bought a small stock of extracted honey put up in quart Mason fruit-jars. After keeping it until he was tired of looking at it he closed it out at 20 cents per jar—good honey, too—while I was selling my extracted at 30 cents per quart, the customer furnishing his own jar.

The remedy for this condition, I think, is in publicity. Educate people to know pure honey by sight, in case of comb honey, and by taste in extracted. Carry samples. Show them that no two sections are exactly alike, while they would be exactly alike if made by machinery.

In selling extracted, if possible secure a sample in the original package, of the glucose mixture sold for honey. Compare it with your own pure honey. Let customers sample it. You will not find it difficult to sell your honey, I think.

It has been my experience that the only thing necessary to make sales is to convince your prospective customers that you have pure honey of fine quality, and of course that is the only kind you should ever attempt to sell for table use, if you care to continue in the business.

Putnam Co., Ill.

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Keeping Comb Honey in Good Condition

BY G. M. DOOLITTLE

A subscriber to the American Bee Journal wishes me to tell how to keep honey when off from the hive so it will be as good when he gets ready to market it, as it was when he took it from the hive. He says that his honey almost always sweats and in some cases becomes nearly sour before he is able to prepare it for shipping to market. This being especially the case when the season happens to be damp and rainy after he takes it off.

It is barely possible that the correspondent removes his honey from the hives before it is fully sealed. This should never be done, unless it is at the close of the white honey harvest, so that the dark honey shall not be mixed with the white, or at the end of the season in the fall, when, of course, we are compelled to take off all sections.

Fully capped honey is not as likely to become watery and sour as is that which is unsealed, and as unsealed honey in any part of the section makes that section more or less unsalable, it is always best, if possible, to leave all sections on the hive until they are fully sealed.

But I mistrust the trouble with the honey has been in its being kept in a room not sufficiently warm, or lacking in ventilation. Any room, or article in such room, will draw or take on moisture rapidly if allowed to become much cooler than the surrounding air at any time, and this room might have been colder than the surrounding rooms, hence attracted moisture to it. If the room had been well ventilated it would have helped much; and had it been thus, coupled with suitable warmth, I cannot see what hindered the honey from evaporating and keeping all right. I have found that a high temperature in a room is of very little service if said room is so tight and close that no draft of air can carry off the moisture. Consequently honey should not only be kept in a dry, warm room, but there should be enough ventilation in and about the room to carry off all moisture which evaporates from the honey; and the larger the pile of honey stored in any room the greater should be the draft or ventilation. Where such a room can be had, even honey that has begun to sweat can be brought back to fairly good honey again; but honey that has been kept in a poor room until it has begun to sour can hardly be made salable again; for honey which has once soured will never become fit to put on the market, and no one who cares anything for his reputation or the good of the market will ever do such a thing.

The warm, dry, airy room will help much to thicken even the worst sweating, souring honey, but it will never bring back its original flavor. I have even returned such honey to the bees, and let them try their hand at making it marketable again; and while they will dry and clean it up even if they have to remove it from the cells and redeposit it again, still it is an unpleasant job all the way around, and at best the honey never looks as nice as when first removed from the hive, and in taste it is very far from good honey from the kind of flowers from which it was gathered.

The best thing that can be done with any honey which has soured is either to extract it and keep it for feeding purposes, after scalding it, or cooking till sufficiently thickened, allowing the bees to clean out the combs; or feed the honey to strong colonies right from the combs, when in either case the combs can be preserved for bait-sections the next season after the bees have thoroughly cleaned them.

Then it is not well to store any comb honey directly on the floor, for where so stored the air cannot go under the bottom of the pile, and through lack of circulation of air under the bottom, honey will become watery in the most dry and well-ventilated room at the bottom-back side of the pile.

Some kind of a platform should be fixed on which to pile the honey, and this platform should be made of open-work so that the honey resting on it can not only have a current of air going up through it, but all about the bottom of the pile.

When I first commenced keeping bees, I stored my comb honey in a room on the north side of the house, and piled it directly on the floor, thinking I was doing the proper thing, as the most of those having bees near here stored their honey in the cellar at that time. But when I came to casing that honey I found that the honey next the wall of the room and the floor had soured and the honey was bursting from the cells, while that higher up in the room, and out from the wall, was still in good shape, as was considered at that time. I took the hint at once, and the very next year found me with a temporary platform fixed of slats, spread apart enough so that the edges of the sections would just catch on them, the platform being raised up a foot from the floor. When another tier of sections was to go on top, strips were placed between, and so on clear to the top of the pile, and in this way there was no hindrance to the air from circulating all round the sections from below, from above, and from between, and around the wood holding the honey. I now had the problem solved, and the same has proven good for more than a score of years.

All these things are little matters, but the *whole* of such little matters applicable to every phase or part of bee-keeping life, when put together to make *one great* whole, makes all the difference between success and failure in our beloved pursuit, according as we understand and use them.

Onondaga Co., N. Y.

Re-queening Colonies During the Summer

BY C. P. DADANT

The re-queening of colonies, or replacing of queens by younger ones has been much discussed. Some of our large producers have advocated the replacing of queens every two years. One of our Western leading bee-keepers has even advised and practiced re-queening, that is, removing the queen to compel the bees to rear another, and thus making an interruption in the breeding. When this method was recommended, I wondered whether it was possible to follow such a method and succeed. My view is that the bees need their queen at all seasons. It is true that they need her less in the summer, after the crop is over, than in the Spring before the crop begins, but the depletion of bees by colonies in the summer is so prompt that there is need of constant refilling of the ranks by new additions, though they need not be so numerous. So I felt that this was a move in the wrong direction.

Later, I had occasion to meet the person in question and to inquire as to the success of his idea, and he acknowledged that it was not satisfactory, though in his opinion this lack of success was due to the conditions of the crop and dates of the harvest of honey. But I doubt very much if any conditions can be found that will justify a killing of queens to compel the bees to rear others, thereby losing some 20 odd days of breeding. In addition to this loss there is also a risk of the loss of some of the young queens. In fact we can safely calculate on losing about 10 percent, that will either be lost in their wedding-flight or that will prove worthless. To eliminate good queens that may prove still good for another year, and run the risk of having a part of them, at least, replaced by worthless ones, is a mistake.

It is also a mistake to re-queen hives that have good, prolific queens, just because they are two years old. If the bees did not usually change their queen by rearing another as soon as they notice that she is failing in her laying, there would be good excuse for such an action, but there is no doubt that the bees do change their queens whenever they lessen their breeding, and it is only in exceptional cases that a colony allows itself to run down because its queen has entirely lost her fecundity. Those who clip their queens' wings have noticed how often these queens are replaced without the knowledge of the apiarist. If this were not the case, an apiary in which no queens were replaced artificially would soon dwindle down to nothing.

But it is advisable and even necessary to replace queens when there are evident signs of lack of prolificness. In my experience, extending over nearly 40 years, with several apiaries, I have noticed that the bees are less likely to replace a queen that is only of very moderate prolificness, but whose capacity is unchanged; that is, a queen that from the first has been of but little value, than to change a queen which has been all her life vigorous and begins to fail. Our attention must therefore be directed to the naturally inferior queens—to those colonies that have given but little crop. It matters but little whether the queen looks bright, if she has not filled her combs with eggs she should be condemned, and looks should not be considered. Not only must those queens be changed, but the bees must not be allowed to rear others of the same blood. Too often our bee-keepers have paid attention to the looks of the bees rather than to their working qualities. That is why so many of our bright Italians are sluggish and slow, though beautiful to look at.

The months of August and September are good months in which to change queens, because queens are plentiful and cheap at that time. We have also been able to discover the poorest and the best colonies.

Those who have produced neither honey nor swarms can probably be made to give a good harvest the following year by changing the queen.

If we expect to rear our queens ourselves, we must be sure and have the queen-cells from the most prolific, and at the same time the gentlest colonies in the apiary, if these two qualities can be found united in the same colony. If we breed from the best honey-producers we will be sure to make no mistakes. But let the queens be reared and laying before we attempt to change our breeders. Better have a queen of mediocre value in a hive than an interrogation point.

As a matter of course if we buy we must know the man of whom we buy our queens, and we must get young queens from an apiary where foul-brood is unknown, for there is but little doubt that this disease may be transmitted by the queens, though it is probably only in exceptional cases. Honey, being used in the larval food is much more likely to spread the contagion than any other thing. But there is too much danger in foul-brood for us to risk anything from a foul-broody apiary. There are plenty of good, reliable breeders, and the business of queen-rearing has become so much of a specialty that it is hardly worth our while to rear queens. I never realized the truth of this as vividly as I did when at the St. Louis Convention. Mr. Gill, of Colorado, one of the most practical honey-producers in the United States, said that it did not pay him to rear his queens; that he preferred buying them, although he needs several hundred every year. Scientific queen-rearing requires a special outfit, and daily care, and is better conducted as a specialty.

Let us bear in mind that the best time to introduce a queen is during a flow of honey; that robbing is the greatest incentive to the killing of strange queens by the bees, and that after we introduce the queen it is best to let the colony alone for several days. Queen-introducing is always more or less risky. Some apiarists will tell you that there is nothing difficult about it, that they have always succeeded. You can just rest assured that the man who has always succeeded is the one who has done the least of it. We practiced introducing in former days when we imported some 40 queens from Italy every season. The best method, in my opinion is the one now generally used by breeders: Cage the queen in the hive, just after removing the old one, and let the bees liberate her by eating their way to her.

Hancock Co., Ill.

Brood-Frames and Frame-Spacing

BY C. W. DAYTON

I wish to answer Mr. Latham, on page 154, that if a bottom-bar is sawed out 1⅛-inches wide, in six months it will have shrunk to about one inch. A top-bar which is 1⅛ at first will be 1-16 less in six months, regardless of how dry the lumber is when it is sawed.

I use what I call full width bottom-bars. That is, a bottom-bar the same width as the top-bar, and on account of shrinkage it makes them finally about 7-16 inch apart when in use, with 1⅜-inch spacing. With side-bars no wider than the top-bar, when any certain frame is to be taken out we can move the frame on both sides away probably about ¼ inch, though there may be honey along the upper edges of the combs. This gives somewhat less than one inch "play" when the bottom-bar comes up past the top-bars.

The ends of the top-bars rest in notches 1⅛ inches wide in strips of galvanized iron. These are used instead of the usual tin rabbet—like the spacer in the "St. Joe" hive, put out by Mr. Abbott, only his notches are twice as deep as those I use. But I employ another contrivance that makes up for the difference in depth of the notches. My bottom spacer is of wire, soldered solidly to a strip of galvanized iron, which is nailed fast to the bottom-board. This wire projects upward between the bottom-bars 1¼ inches and is shaped like the rounded or closed end of a wire hairpin. Quinby advised a wire spacer, in the appendix of his "Mysteries," published in 1860, but he fastened it to a strip of wood. Soldered to iron is better. In fact, by soldering it in a permanent position is the only way wire can be used at all. But when so used it becomes the best spacer.

If it were not for these bottom-spacers, the full width bottom-bars would crush bees when their edges pass one another in the bottom of the hive, but before they come together by about ½ inch they are caught between the spacers and guided into their positions.

On page 38 mention is made of frames which were 10 to 12 inches. Dzierzon favored a hive which was only 10 inches wide. Langstroth adopted a hive having a 14-inch frame, the same as your present adoption. And he probably never would have used any other length had not Quinby told him of long hives being good winterers. Then Mr. L. went to work and made his hive with frames 24 inches long.

It is pretty certain that Quinby adopted the length of frame on account of wintering while the depth was all right for the production of comb honey by side-storage. But for extracting, so large and deep frames are unwieldy. But extractors were unknown at that time. If I am not mistaken, the British Association adopted the 14-inch frame as the standard. Cowan and Cheshire both use the 14-inch length. And Mr. Root also used and preferred the 14-inch length; so all evidence goes to show that that was the best length

As to those closed ends I have no love for them. It seems to be a cheap way of providing an outer casing. Americans are getting to keeping bees entirely too cheaply. I expect they would have their colonies camp out under a little piece of canvas if they could get the honey that way. If one bee gets smashed between two side-bars their purpose is spoiled. Bee-glue will begin to accumulate so as to need scraping every time they are handled—*a la* Hyde. I haven't scraped a frame in 20 years.

Gallup's plan of an outer protection was to make the super or cover 12 inches deep. Then tack the strip which the cover rested upon, and which extended all around the brood chambers some 8 inches below the upper edge of the brood hive, so as to telescope. Then put a good chaff cushion in the cover over the bees. I saw these in his apiary at Osage, Iowa, in 1881. I would think a colony would be about as cozy in that fix as in the old straw hive.

MARKET CHANGING FROM COMB TO EXTRACTED.

I find it easy to shape a market according to what can be produced for it. When I came to Southeast Los Angeles, ten years ago, all the stores were selling comb honey and no extracted. Now since we have been pounding away in the same spot and manner with extracted honey, there is not one case of comb honey sold there in a year. And the five stores there know better than to get any comb honey in stock. They all have a good trade on extracted. A pound of comb honey could not be found within three miles of Florence. Yet in all other stores about the city comb honey takes the lead. Now, while a hive arranged for the production of extracted honey costs about the same as for comb honey, I think a hive built for the production of extracted especially, can be run with one-third the labor. Los Angeles Co., Cal.

Our Country's Undeveloped Apiarian Resources

BY PROF. A. J. COOK

I have just made the entire transit of our great country and I have been greatly impressed with the apparent magnitude of unused bee-forage. I made a brief stop on the Sacramento river, and while there visited my friend, Thomas W. Stevenson, who today owns an apiary which as he informs me rarely fails to give a crop, in precisely the same locality that his father used for bees years ago. Indeed I bought honey from his father from this same apiary over 40 years ago.

The reason that Mr. Stevenson is so uniformly successful is not far to seek. He runs a large and successful dairy, and owns great fields of alfalfa. Indeed, he is in one of the best alfalfa regions of the Coast. Here, as in the San Joaquin Valley, unlike the alfalfa bloom of Los Angeles County, the alfalfa flowers secrete richly of nectar.

While in this region, I visited the Lisbon Reclamation Tract, on the Yolo side of the river. It was never my pleasure to look upon finer fields of alfalfa. Hundreds of acres of this magnificent plant could be seen at a glance of the eye, and much bloom was in evidence. Yet there were very few bees so far as I could see. As the conditions here are so similar to those on the Stevenson ranch, it seems almost certain that this would be a good region for the apiarist.

As we came north along the beautiful Shasta Route, through the Sacramento and Klamath Valleys, and thence on into Oregon and Washington, it came to me over and over that here, as on the Sacramento, much nectar was going to waste because no apiarist was there to utilize the rich floral resources of the region.

As we came east over the Northern Pacific, through Montana, North Dakota, and Minnesota, the same condition was apparent. Surely, we have a wonderful country. The man's soul must be very dead, indeed, if he does not exclaim proudly, "This is my own, my native land." Probably the bee-keeper of no other land has greater reason to boast. Yet I doubt if we have even more than touched the apiarian possibilities of our great country.

Since making this trip across our continent, I have asked one who is in position to know, if there are not successful honey-producers in all these regions. He answered, "Yes, but very few of them." This makes me more certain of the two positions which I take in this article: Excellent bee territory, very much of which is not occupied.

IMPORTANT WORK FOR THE DEPARTMENT OF AGRICULTURE.

The fact of flowers does not necessarily argue a honey region. The flowers may bloom when bees are few in the hive, as in case of most fruit-bloom, and thus, while these are valuable, unless they are supplemented by later flowers, such regions are worthless for bees.

Again, climatic conditions may stay nectar-secretion. I have often referred to the fact that while alfalfa is a great honey-plant in several States and regions, in parts of California it seems almost worthless for such purpose. For this reason, it would not be wise to embark in the bee-business in any of the promising valleys mentioned in the above paragraph, until an actual trial had proved the regions. This kind of knowledge is of great general importance, and it ought not to devolve upon the individual to gain it. What better work could the Agricultural Division of the Department of Entomology at Washington do, than to determine just this point?

Which of the great valleys of the West are really valuable for bees? Surely such knowledge is most desirable. It is to be feared that it will be long delayed, greatly to the detriment of our people, if left to individual enterprise. Great economy could be practiced if the Government should undertake in scientific fashion to determine these facts.

AGRICULTURAL WORK AT WASHINGTON.

Without doubt all our bee-keepers have read with more than passing interest, the important article in one of our leading bee-papers, by Mr. Frank Benton, regarding his trip to the Orient in search of new varieties or species of bees that we may possibly improve our apicultural possibilities. I have long thought that such work might well be undertaken, by the Government, and urged it upon the Department of Agriculture several years ago. Yet I am asked the very pertinent question, Why did not Mr. Bentou give the article to all our bee-papers? He, as an officer of the Government, is working for the whole people, and surely he, and Dr. Howard as well, would be glad to have the work of the Department receive the greatest publicity possible. It would have been very easy for Mr. Benton to have furnished all the bee-papers with duplicate copies of the article. It is equally certain that all the papers would have been glad to have published it. Of course, they are not so eager, if the publication is of necessity delayed and so seems to indicate a lack of enterprise on the part of the editor.

I am sure that this matter has only to be brought to the attention of Dr. Howard and Mr. Benton to secure the desired change.

HONEY CROP IN MICHIGAN.

I think I have called the attention of our readers to the fact that the present season has been disappointing to the bee-keepers in California. The abundant rains gave great promise, but the exceptional cold of the early part of the year interfered greatly with success. In the East, the season has been one of excessive rains—indeed, one of the wettest seasons ever known. If I am correct, such a season in the East is favorable to a generous honey crop. Of course, if the rains preclude the flight of the bees so that they cannot work, or if the season is too cold for the secretion of nectar in the plants, there may be a dearth of honey even in these wet years.

I think the present season has been wet and cold throughout the East, and I believe, until quite recently, the weather has been so cold that the honey promise has been disappointing. This seems not to have been true in this part of Michigan. At Owosso, where my brother has a large apiary, he informs me that he has already secured a large amount of honey, and the bees at the present time (July 19) are gathering very rapidly. I believe it is generally conceded that the honey crop of Michigan this year will be well to the front.

SAGE HONEY.

Mr. Milo Smith, one of our readers from California, writes me that in his section, black sage produces much more honey than does the white sage. I think a good many bee-keepers in California have the same feeling. I think the honey from all the sages is so much alike that it would be indistinguishable. The fact that the black or ball sage pushes farther up into the canyons would certainly give it a wider range of bloom. It often blossoms much before the white, and the flowers continue for a long period. Its locality is usually also more moist, and thus adds to its certainty as a honey-producer. I think that very likely the preference of either plant would be more due to surrounding conditions than to the plants themselves.

I did not wish to give the impression in my articles that sage honey is superior to clover, linden or mesquite. The honey from all these sources is so excellent that it would be invidious to make comparisons.

Doctor Miller's Question-Box

Putting on Supers—Winter Stores

1. If one should give a super to a colony of bees when the brood-frames were about half full of brood and honey, would the bees leave the frames below and work in the super, or would they fill up below first?

2. If one should take only what honey is stored in the supers at the close of the season, would there be any danger of taking too much away from them so they would not have enough to winter on, or would they provide for that in the frames below before they filled the supers?

3. Is there any danger of giving a super too soon?

MAINE.

ANSWERS.—1. If strong enough they might work in both places. If they had only strength enough to work in one place, it would be below; and in general they prefer to work as near the brood-nest as possible.

2. Generally not, but sometimes, especially with a small hive, there would be danger of a sudden close of the harvest with so much of the brood-chamber occupied with brood that there would not be enough winter stores.

3. Yes, if you should give a super a month before the harvest it would be making the bees keep up the heat unnecessarily in just so much more room.

Cutting Out Queen-Cells—Honey-Sections vs. Strawberry Boxes—Yellow Bees

1. Do you think it is all right to cut out all the queen-cells in a hive when the second swarm goes out? I cut them all out and hive or catch the second swarm in a hiving-box, then put them right back.

2. At swarming time I have some hives with full-size combs, and most of them with space of ½ inch not attached to the bottom-bar. When hiving a swarm I tip the hive over till they will work up on the top-bar. Has this plan been tried already?

3. Are there more honey-sections or more strawberry boxes used? I mean in the United States, on an average, right through?

4. Which kind of queen do you think is the better? I have seen some very yellow and some pretty black ones in my apiary.

5. Do you call the yellow ones Italians?

6. When does basswood blossom here in Marathon Co., Wis.?

7. How often is the average time to go through the hives and cut out queen-cells?

WISCONSIN.

ANSWERS.—1. Yes, that will work all right, providing you don't miss any cells. If you miss any the swarm will come out again, but of course you can return it again. The plan is a good one where you wish to keep up the strength of the mother colony, but many prefer to have the force mostly in the swarm, setting the swarm on the old stand, the mother colony close beside it, then moving the mother colony to a new place a week later.

2. Yes, many have tried it, and some hives have been constructed with especial reference to turning somersaults.

3. I don't know. My guess would be that the strawberries have the majority.

4. It isn't a matter of color. Some black queens are better than some yellow ones, and some yellow ones are better than some black ones. And there will be two young queens from the same mother, one light and the other dark, one good as the other.

5. Yes, but Cyprians and others are also yellow.

6. The time varies in different years. This year it was probably not far from July 1.

7. That depends on the management. The majority of bee-keepers do not kill cells at all. If you mean to destroy cells with the object of hindering swarming, it should be about once in 10 days. But in the majority of cases that will not prevent swarming, only defer it for a time.

Itching from Bee-Stings

Is there any danger from bee-stings that cause intense itching all over? I got a lot of stings on my right hand the other day. I put my hand into a tub of pond-lilies, bees and all, and kept it in about a minute, then took it out. There were lots of stings in my hand, and I pulled them out. In about 5 minutes I was itching all over. It was something terrible. I knew that something must be done right away, so took a big drink of whiskey. In a short time I was better. I have handled bees for 10 years, and never had anything like that before. I did not mind one sting, nor half a dozen. Possibly my blood was poor, but I am in fine health, all the same. I hope it will not happen again, for once in 10 years is often enough to take a drink of whiskey.

MAINE.

ANSWER.—I suspect you would have done just as well without the whiskey, and I'm sure you would have been better off without that minute in the pond-lily tub, for during that time the stings were busy pumping in poison. The stings should have been scraped out immediately. Possibly a wet pack would have been a good thing. It is not likely that there is danger of anything more severe another time, although one can not always tell.

Superseding Queens—Introducing—Building Comb—Danzenbaker Hive—Drone-Brood in Sections—Foul-Brood Law in Illinois

1. What time of the year is the best to supersede old queens?

2. Should they be superseded while the bees are working in the sections?

3. If I want to introduce a queen to a colony that is working in a super where can I place the introducing cage?

4. The directions on the cage say to place the cage over the brood, but as there is only ¼-inch space between the frames and the super, I can't put the cage there, and if I space the brood-combs wide enough apart to put the cage between them, won't the bees build comb between the two frames?

5. When I receive a queen from the mail, should I take out the escort bees before introducing the queen?

6. If I take a queen from a colony and replace her with a caged queen will they build queen-cells while the queen is caged?

7. Have you ever tried Doolittle's plan of getting worker-comb and section honey built at the same time, as described in "Gleanings," pages 723 and 724? If so, what is your opinion of the plan?

8. Will bees build comb behind the division-board of a hive if there is more than a bee-space behind it, say ¾ of an inch, if they have room to work in the sections?

9. What are your objections to the Danzenbaker hive?

10. I have one colony of bees in a 10 frame dovetailed hive that has all the frames filled with brood, and one of the supers has drone-brood in the bottom of the sections. What shall I do with it?

11. Has Illinois any foul-brood law? Illinois.

Answers.—1. Most of the superseding by the bees occurs toward the close of the honey harvest, and there is probably no better time.

2. There would be no objection to a change of queens during the latter part of the honey flow; no bee is living in the time of the harvest that hatches from an egg as late as three weeks before the close of the harvest.

3. Anywhere where the bees "do congregate"; there being no better place than right between the combs in the brood-nest.

4. You will find that you will not need very wide spacing if the brood-combs, right where there is brood, are shoved together till the cage is crowded into the brood, and the bees are not likely to trouble by building comb there. If they do build a little it can easily be cut away.

5. Generally they are not taken out.

6. Yes, unless you follow Mr. Abbott's plan—a good plan, too—of caging the queen for 2 or 3 days, leaving her so the bees can free her, at the same time you remove the old queen.

7. No, for I have combs built on full sheets of foundation; but I think Mr. Doolittle's teachings, as usual, are sound.

8. I think not.

9. Difficulty of handling rapidly without killing bees, and trouble with pollen in the sections, are two of the reasons. Another reason is that I don't know of advantages enough to make them preferred to the dovetailed.

10. There is nothing but to cut the brood out of the sections, using the rest of the section as chunk honey. To avoid the same thing again, use a queen-excluder under the super, or, what is perhaps better still, fill the sections full of worker foundation.

11. Strictly speaking, no; a sum is appropriated to help toward keeping down the disease, but there is no law *compelling* me to do anything about it if I have foul-broody colonies. It is hoped, however, that what has been done so far may help toward getting a satisfactory law.

Alfalfa—Bee-Sting Remedies

1. I have an abundance of white clover, and I have read about alfalfa being such a good honey-plant. Would you advise me to plant some, or would the white clover be plenty?

2. What is a good remedy to keep bee-stings from poisoning me so? This must seem a silly question to you, but it is an important one to me.

3. What is the latest in the season one can start a nucleus and be safe?

I read the American Bee Journal and can not recommend it too highly. Minnesota.

Answers.—1. I doubt your gaining much by alfalfa so long as the bees have more white clover than they can take care of.

2. A great many remedies for bee-stings have been given, and what is commended by one seems to fail with others. The important thing is to get the sting out instantly. Among remedies offered are ammonia, saleratus or soda, juice of onion or plantain leaves, kerosene, cloths wet in cold water, etc. A homely remedy, perhaps as good as any, is to lay on the place moistened clay or mud. *Don't rub or scratch.*

3. That depends upon the kind of season, the strength of the nucleus, and the amount of help you give it. Two Langstroth frames well filled with brood and well covered with bees the 1st of August, with the right kind of a season, may build up to a fair colony without help. Usually however, commencing as late as that, they would need help in the way of bees or sealed brood, or both.

Wine Barrels for Extracted Honey

How would wine barrels do for holding extracted honey? I have a number of them, and they are clean and almost new. Iowa.

Answer.—I have an indistinct recollection that some one has objected that honey was inclined to ferment in such barrels.

Mosquito-Hawks Catching Bees

I have 5 colonies of bees, and the mosquito-hawks are catching them very rapidly. Do you know any way to stop it? They come only early in the morning and late in the evening. I am about two blocks from the woods or swamps. Louisiana.

Answer.—In an early volume of Gleanings a writer said they were easily scared away by boys or brought down by whips.

Best Bees for Super Work

Which is the best bee for super work, the black, the Italian, or the golden? I have all three kinds and the goldens are in the lead so far, but some people tell me they are no good for super work. Kansas.

Answer.—The way to decide is by their work, and as you have the three side by side you can tell better than any one else which does the best work for you. You will find bees of either of the three kinds that are good for super work, as well as some that are poor. You can't always tell by the color of a man's hair how big a day's work he can do.

Transferred Bees Rearing No Brood

I have a colony that I transferred from one hive to another, and they seem to have the hive about half full or better. I made the transfer about 3 weeks ago, and there is no sign of any brood yet that I can see. I also took one out of a tree about 2 weeks ago, and they haven't any sign of brood. The one I transferred first had no queen, and I put in another queen, but I think they killed her. How long after they are transferred do bees begin to rear brood, and what shall I do with them? I can never find a queen. Iowa.

Answer.—The queen should go right on laying with scarcely any interruption, and in 3 days after an egg is laid a larva will hatch from it. You are probably correct in your supposition that the queen was killed, and another should be given. A queen should also be given in the other case, as well.

Uniting Weak Colonies

Last fall I attended a sale near here where a bee-keeper was selling out to remove to California. As the bees were put up and bid off colony after colony, I thought it would be a fine thing to own a colony or two to provide honey for family use, so I bought a couple of colonies in Langstroth hives.

Afterwards I bought a colony in a box-hive. Then I brought them home and packed them for winter. They came through in good condition. This was only the beginning. Soon after I bought them I discovered I had an "elephant on my hands." I knew about as much about bees as a hog does about Sunday.

So I subscribed for the American Bee Journal, bought a text-book, and straightway became almost inextricably mixed up in a maze of queen-cells, brood-frames, supers, etc. I persevered in my studies all winter, and this spring I laid in a stock of bee-supplies and began puttering with the bees. When those in the Langstroth hives prepared to swarm I divided them, letting the queenless part rear its own queen. I also found a couple of bee-trees in the woods. These I cut down and transferred, so now I have 8 colonies, some strong and some weak. They all have laying queens now (July 10), and if we have seasonable weather from now on I am in hopes will all be in good shape for wintering.

There is quite a lot of big timber here yet, and a good many bee-trees are cut every fall. I have often seen colonies starving to death where the tree had been robbed. I always felt sorry for the bees and wished I could do something to keep them from perishing.

1. If I should have some weak colonies this fall, say covering 4 or 5 Langstroth frames, could I unite with one of these "naked" colonies?

2. Would it be an advantage to me, or otherwise?

3. How much more stores would it take to winter the united colonies than the weak colony by itself?

MISSOURI.

ANSWERS.—1. Yes, you could thus have a strong colony instead of a weak one, but you must take more pains as to uniting in fall than during a flow, and of course you must look out to have stores enough.

2. It would be an advantage to have a strong colony rather than a weak one.

3. I don't know just how much, but at a guess I would say that if you unite two weak colonies of equal strength, the united colony would not need more than 50 per cent more than either of the colonies separately. If that be a correct guess, you will see that it would be a saving of one-fourth of the stores. More important than that, it would, in many cases, be a saving of one or both of the colonies.

Sweet Mixture for Winter Stores

Would a mixture of sugar, "sugarall" and corn-starch do to feed bees for winter stores? Of course most of the starch will settle to the bottom so the syrup could be poured off. I can get any amount of this mixture for nothing, as I handle the syrup after it is mixed, and at noon and night the tanks are emptied, and it is thrown away. It is very sweet. We will all agree that the sugar is all right, but what about the starch and "sugarall"? MAINE.

ANSWER.—I don't know. It would seem a little doubtful that anything of so little value as to be thrown away would be good feed for bees in winter. You could easily experiment on one or more colonies. Even if not safe for winter food, it might be good to feed for brood-rearing in spring.

Greatest Honey State

What State has made the greatest success with bees and honey during the last 10 years, and what is the best location in the State? I want to go into the bee-business quite heavily.

KANSAS.

ANSWER.—Put in short, your question asks for the best location in the United States. I don't know just what that is, but there are a number of excellent locations. Take the names of the leading producers of large crops of honey, and each one of them is likely to have a good location. But that doesn't interest you particularly, for such locations are fully occupied already. Answering more directly your question, Texas contends with California for the highest place in honey-production, but I don't know what available locality in either is best.

Motherwort—A Good Honey-Plant

In my back yard grows this weed. It is a very hardy one, as I have tried to exterminate it and failed. It comes early and grows to be 3 feet high. I never happened to notice till this spring how especially fond the bees are of it. Now I am interested and want to grow it in waste places. Very early in spring it begins to bloom, probably when 8 or 9 inches high. As the stems grow it continues to bloom, while the first bloom matures into seed. You will notice this on the enclosed stalk. The bees prefer it to catnip, white clover, basswood, or anything else. What is it? And is the yield such as to pay growing it? When must one plant the seed and how? We would have had an immense honey-flow here but for the rains. I should have added that as these flowers mature into seeds the pod is a burr. ILLINOIS.

ANSWER.—It is motherwort. It is counted a good honey-plant, and is good for waste places, but it would hardly pay to occupy with it cultivated ground. I know nothing about its cultivation—never heard of its being cultivated—but you would be pretty safe to sow at any time when seed matures.

Swarms Uniting

What is the reason my bees act as they do? Monday morning, July 10, I noticed one colony of bees swarming, and they settled on a small plum-tree. About the time I was ready to put them in the hive another colony swarmed, and settled on them. I was about to put them in when another swarm settled on them, making 3 swarms in one from 3 different hives. I put them in a hive and they seem to agree all right. If any one doubts it he can bring 2 hives and have the pleasure of separating them.

WISCONSIN.

ANSWER.—Unfortunately the behavior of your bees is nothing very exceptional. If two or more swarms are out at the same time, they are very likely to go together, and some have reported five or more swarms in one huge mass. The consolidation of your three swarms will do good work, only by next spring the colony will be no larger than each of the three would have been if they had been separated. You could have divided them into two or three parts, dipping up the bees with a tin dipper, and giving each a queen. The finding the queens is not so very difficult, as in case of such uniting the queens are likely to be found balled.

Convention Proceedings

Report of the Chicago-Northwestern Bee-Keepers' Convention, held at Chicago, Ill., Nov. 30 and Dec. 1, 1904

(Continued from page 490.)

FIRST DAY—AFTERNOON SESSION.

Pres. York called for the report of the Foul Brood Committee which had been appointed two years ago.

REPORT OF THE COMMITTEE ON FOUL BROOD.

Mr. Moore—The Foul Brood Committee, of which I have the honor to be chairman, really has nothing to report. We reported in full to date at the last meeting, and from then till now there was no work that could be done except inspecting apiaries. I don't suppose that comes under the scope of this report. There is a heading in the program that does refer to such matters as that. We might make our recommendations; we might tell you a lot of things; we might say this fall the Legislature meets again and we have to get the law over again, or fail to get it. Mr. Kannenberg is with me on this committee, and I believe there is a vacancy to fill. As the committee having charge of this matter, we have to urge upon each one of you individually to do what you can to get a law through the Legislature this fall. If you know some member of the Legislature, communicate with him by all means. If you do not know any member take the pains to find the names and addresses of the nearest member to you and communicate with him. If every one of us would do that it would have a material effect. When I was there two years ago and appeared before committees of the Legislature to get the laws we did get, they said, "For goodness sake, stop writing us letters; we will give you anything if you will only quit writing to us."

Advertising is what we want, and the members of the Legislature must know we are alive. How are they going to find it out unless by individuals writing and saying, Give us the laws we need? But hundreds have to do that. We want to ask this fall for either five or ten thousand dollars. In this State there are 102 counties. The State, in its census, has formally said that there are 35,000 bee-keepers in Illinois. If there were inspectors enough to cover that ground it would take 50 to 60 working six months. You can see how far five or ten thousand dollars would go. I had a conversation with the Hon. Mr. Austin, who got our last Bill for us, and he saw the point; he saw a thousand dollars wasn't a beginning for this great State of 102 counties with that number of bee-keepers. So that we want this fall $5,000 from the Legislature to spend in the interests of the bee-keepers in this State, and it is a question of judgment whether to ask for $10,000 and give them a chance to cut it in two, or ask outright for the $5,000 we want. If you don't ask for anything you won't get anything, and in order to get anything we must have the help of all the bee-keepers in the State. I would like to hear from Mr. Kannenberg, who is a member of this committee, and has some things to say.

Mr. Kannenberg—I am one of the committee and we did pretty good work last year. I do not know whether we can do it this year or not. But one thing I think I must say, if we want to strive for that law we must have a compulsory clause in it or else it is no good to us whatever.

Dr. Miller—Hear, hear.

Mr. Kannenberg—That is right, Doctor. We want about $10,000, that is about the only thing; and they will give us only half, the same as in damage suits, if the bee-keepers don't join in with us; I think we won't get much out of it if they don't help us the way they did last year. Last year I wrote hundreds of letters to all the Senators; I hope it did some good. As far as I know, the Hon. Mr. Austin is again elected to the Legislature with a large majority. I have not spoken to him this year, personally, because he is on his honey-moon trip. As soon as he comes back I am going to speak to him.

Mr. Wheeler—I would like to ask who the other Committee man is?

Pres. York—Mr. Clarke, I think was the other member of the Committee, but he has not served on the committee at all.

Mr. Wheeler—I would like to ask how many colonies of bees Mr. Kannenberg has?

Mr. Kannenberg—82.

Mr. Wheeler—How many has Mr. Moore?

Mr. Moore—I have never kept a large number; I have less than 35 now. My family keeps about 400.

Mr. Wheeler—What I was getting at was, we want representative bee-keepers on this committee; we want people interested, and that have thousands of dollars invested.

Dr. Miller—I have more bees than Mr. Moore and I don't believe that I could influence Mr. Austin as much as he has done. A man may represent a body of people without himself being one of those people. Possibly it would have its weight; at the same time if he can present the thing the right way that is more than to say he has the bees.

Mr. Colburn—A man has a thousand colonies of bees and he goes to our Legislature and he says, I want this and that, and the fellows say, you are selfish. If I have but very few bees and I go there for somebody else it will be two to one I will get what I ask.

Mr. Whitney—My experience with politicians is that the man who has some influence in the community is the man who will get some help from the Legislature, not the man who may possess perhaps a thousand colonies of bees, or any other interest that he may represent. I know individuals who haven't a single colony of bees that I think would make good committeemen for that very purpose. It seems to me the point is well taken.

Mr. Becker—On behalf of Mr. Moore I will say that he is the right man in the right place. I have had some experience with Mr. Moore in the Legislature. Mr. Smith and I were before the Legislature when they tried to get our law passed and I know what efforts Mr. Moore made in that direction, and we never left until we had the guarantee that the law would be passed, as far as the Committee on Appropriations goes. We couldn't wait until the House debated on it and the Senate, but we had the promise of the Committee; and they passed it in the House and in the Senate before they left.

Mr. Wheeler—I don't like to be misunderstood. It wasn't in regard to getting that appropriation I was speaking, and getting the Bill through; it was in regard to the committee's work afterwards. You must not lose sight of the fact that people are interested that have money invested, and it must be looked into a little and we must see that we do not take men who are not interested financially in bee-keeping and who are not interested in the welfare of bee-keeping.

Pres. York—As I understand it, it does not make any difference after the law is secured. This committee has nothing further to do. The inspector is then appointed on the recommendation of the State Association, and the money is turned over to the State Association.

Dr. Miller—I move that the report be accepted and the committee continued.

Mr. Smith—Has that vacancy been filled on that committee?

Pres. York—Not yet.

Mr. Smith moved, which motion was duly seconded, that the chair fill the vacancy.

Pres. York—I think we might as well consider it a vacancy because Mr. Clarke has never served on the committee.

Mr. Wheeler—I object to that. I don't believe that is fair.

Pres. York—Then we had better have a motion to declare the vacancy.

Mr. Moore moved, which motion was duly seconded, that a vacancy be declared in the office of third committeeman of the Foul Brood Committee. [Carried.]

Pres. York then put a motion to fill the vacancy which on a vote having been taken was declared, carried. Mr. Horstmann was then appointed as third committeeman on the Foul Brood Committee.

Pres. York then put the motion to accept the report and continue the committee, which, on a vote having been taken, was declared carried.

Pres. York—Before we take up some of the questions which have been handed in we will have a talk by Mr. Ernest R. Root, of Ohio, on

BABY NUCLEI AND MATING QUEENS—BRICK HONEY

(Mr. Root exhibited before the convention a baby-nucleus box, illustrating his remarks as he went on by pointing out various features of the little outfit. We have since obtained a series of illustrations, and think the reader will have no difficulty in understanding Mr. Root's explanations if he will keep before him the illustrations.—Editor's Note.)

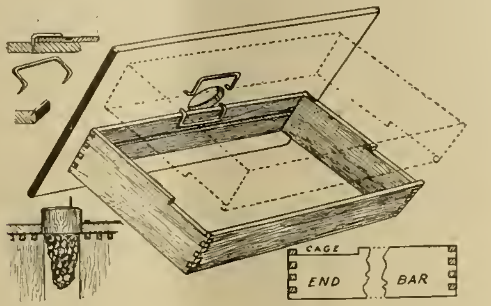
Perhaps those of you who devote your *whole* attention to the production of honey, may think that what I am now about to say on this subject will be of no particular interest to you for the reason that you can better afford to buy your queens than to rear them yourselves. This, I believe, is a mistake, as the honey-producer should properly inform himself as to the latest method of rearing queens so that he can rear his own stock as a matter of economy. I hope to show you, therefore, that you can afford to rear your own queens to a very great extent after having purchased one or more breeding queens, or having selected something from your own stock which shows an unquestioned superiority over other stock in the yard.

The business has been developed to a very pretty science. Indeed I know of nothing in all the realm of bee-culture that is more interesting or more fascinating than watching the baby queens develop into full-fledged mothers.

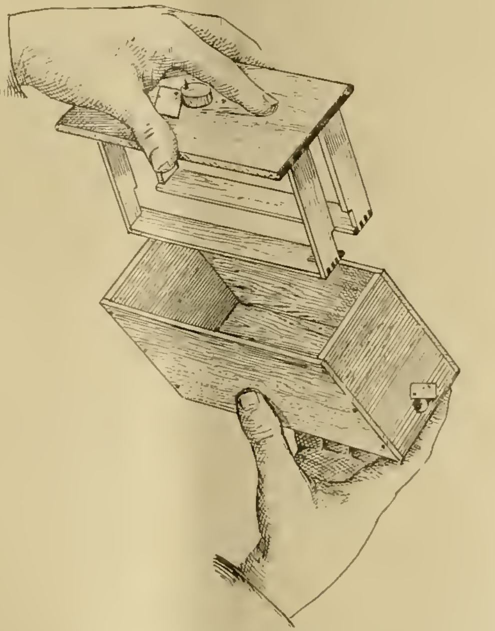
It will not be necessary for me to explain how queen-cells may be reared in wooden cell-cups in quantity, nor how the eggs of one or two breeding queens may be used for all the cell-building work. This part of the operation has been usually regarded as simple and easy; but the problem of getting the young hatched virgins *mated*—aye, there has been the rub. I desire to show you a method whereby even this part of the work can be accomplished simply and easily, and at a trifling expense in bees and brood.

Until within the last year or so, full-sized two and three frame nuclei using standard Langstroth frames have been employed for mating the virgins. To make such, it has been necessary to break up a good many otherwise strong colonies for honey-production. As a general rule, only three or four nuclei could be made out of one colony. This made the question of mating somewhat expensive. Mr. Pratt, Mr. Laws, and others who have worked at this problem, have now demonstrated that a small teacupful of bees and one or two sections of comb will serve as good a purpose as a large nucleus, with the added advantage that the queens can be found instantly.

I hold in my hand here one of Mr. Pratt's "baby" nucleus-boxes. As you will see, it is a miniature hive made of quarter-inch stuff with a small flight-hole in front. This has a tin slide on the outside so that the hole can be closed, and a perforated zinc slide on the inside. This latter can be revolved around, holding the queen after she is mated. The little frames, as you will note, are secured to the cover, having no ears nor projections. They are not made permanently fast, but are secured by a staple bent at right angles, folded over against the top-bar. When these little frames are filled with comb and bees, the cover is turned bottom up, leaving the frames standing upright. If the queens or the eggs are not discovered on the two outside surfaces of the combs, a sliding twist will remove one of the frames so that its inside surface, as well as the inside surface of the other comb, can be readily seen. If the queen is laying, the fact can be noted at a glance. If she is to be caged and sent out through the mails she can be located without hunting. We have gone so far as to take every bee in the box and put it in the mailing-cage with the queen. In cases of this kind we supply the box with fresh bees in the manner I shall presently explain.

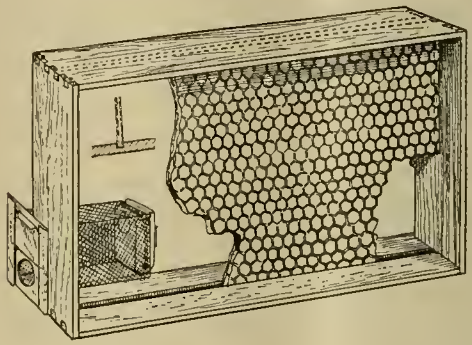


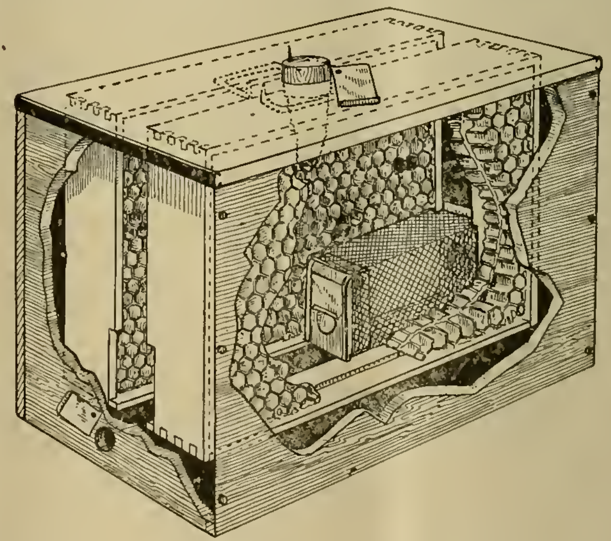
To get these little "baby" frames filled with comb, we make them of just the right size so that six of them will fit in a standard Langstroth frame, a good deal as eight sections used to be inserted in the old-style wide-frame. Each of these little frames is supplied with foundation, and the whole six in one frame is set down in the center of a strong colony. In a few hours the comb will be drawn out, and will contain some honey if honey is coming in, as well as, possibly, a few eggs.



We have a good many of these frames, each containing six small frames, scattered through the yard so that we can get freshly sealed combs whenever we need them for the "babies," for that is what we call these miniature nuclei

Now, then, how do we supply these little boxes with bees? We prepare a lot of them, say a dozen or so, with combs all ready for the bees. We next go to some good colony and shake all the bees into a box, having previously smoked them in order to make them quiet, and to get them to gorge themselves with honey. This box of combless bees, after giving the brood to other colonies, is then carried to a shady place where we have the prepared miniature nuclei. The box of bees before scooping up is given a bump in order to get them into a heap. The cover is removed, and with a tea-cup we scoop up one or two hundred bees and dump the teacupful into one of the baby boxes, when the cover with its combs is set down in place, thus confining them. In a like manner the other babies are supplied. Of course, the entrances are kept closed. Having supplied all the bees, we can now give each through the hole in the cover a queen-cell built on one of these wooden cell-cups; or in 24 hours after the bees have come to know their utter queenlessness we may run in a young virgin.





We can now distribute these baby boxes around in different parts of the yard; but it is usually advisable to carry them to an outyard or to some isolated locality where there may be one or two hives with a large predominance of selected drones. The queens are allowed to fly at this yard and become mated, when they are brought home and kept for supplying queenless colonies or to fill any orders that one may have; for these little boxes of bees will hold their queens for a considerable length of time. It may be neces-

HOW PRATT FEEDS SYRUP TO THE BABY NUCLEI.

sary to "repeople" these boxes, for Mr. Laws says these clusters sometimes get uneasy; but we have kept these same little clusters going all summer, rearing their own brood, and working a good deal on the same plan as the ordinary strong colonies.

I wish to call attention to the fact that one can almost control the male parentage of his bees by selecting some locality where there are no bees, and keeping there a few hives of select drones.

BRICK HONEY.

"I show here a sample of "brick honey," or what has been appropriately called "honey butter." It is nothing more nor less than an oblong cake of candied honey hard enough to hold its shape. It is wrapped in paraffin paper and then given other wrappings, or, better still, putting into a carton and properly labeling it on the outside. These bricks of candied honey are secured from the cans of alfalfa honey—the honey, of course, being granulated solid. The tin can is stripped off from the cake with a pair of tinner's snips. The block of honey is now put into a regular machine for cutting up butter into bricks. This consists of a cast-iron plate with four upright standards on which slides up and down a frame having two or more wires stretched tightly across it. These wires are forced *perpendicularly* down through the block of honey by a steady, even pressure. Another frame swung on one of the standards as an axis, carries another set of wires which cut the honey on a *horizontal* plane. When cut up, these bricks can then be taken off with a thin-bladed knife, placed on a piece of paraffin paper of suitable size, and wrapped.

We have developed quite a business in putting up brick honey at Medina and vicinity. It is now offered in some of the largest retail stores in Cleveland. Of late we have been calling it "honey butter;" and under that appropriate title it seems to take well with the general public. Our labels show how to liquefy, if preferred in that form, and also explain that pure honey, or nearly all of it, will turn to this solid state at the approach of, or during cool weather.

I believe this brick honey has a bright future, and that many of our honey-producers will find it a field well worth developing in their own localities. Ernest R. Root.

Mr. Wheeler—Do you have any absconding?

Mr. Root—Very little. I expected that, but we had very little. Our early experiments indicated there would be more or less absconding but I do not think that will be the case.

Mr. Kimmey—I understand the advantage of taking that to an out-yard is to control the drones?

Mr. Root—That is all.

Mr. Meredith—Do you expect to put them on the market? If so, about what would the complete expense be?

Mr. Root—We are going to put them on the market. What the price will be I don't know. I am glad I don't. I don't think it would be proper for me to mention prices at this time.

Mr. Meredith—Will they be in your catalogue?

Mr. Root—In 1905.

Mr. Colburn—The queen-cell is sealed?

Mr. Root—Yes, what we call a "wrapped queen-cell."

Mr. Colburn—Would that be warm enough in severely cold nights?

Mr. Root—I couldn't say as to that. In our locality we had no difficulty from that. We had those cells hatch along in November. This cage is what we call the Titoff case. It is quite convenient for holding the cell.

Dr. Miller—With your indulgence, I would like to say if you want to try the plan of having queens fertilized with baby nuclei, that you can do it without any arrangement of this kind at all, only just what you have at home. I reared a number of queens last year and had them fertilized. I followed Boston Smith's rule, "Do the best you can with what you have." I didn't have anything of that kind. I had an ordinary hive that I use every day, a dove-tailed hive. In that I put a wide frame that will hold four sections. In that I put one section of honey filled solid full of honey. Another frame beside it with a section of comb, no honey in it at all. It doesn't matter whether there is or not. I put those two in the hive. Had the hive closed up in front so that it would have only an entrance of one-quarter of an inch. Then I go to a hive, take out a frame of brood with the adhering bees and bring it to that hive. Then I tell my assistant to take that and pound off the bees and at the same time I drop a virgin queen in the bottom of the hive, quickly shut the thing up, and leave them fastened there for three days. Then open the entrance, and that is all. The bees do the rest.

Mr. McCain—After forming the little colony—the nucleus—how long does Mr. Root keep that closed before liberating the bees or the queen?

Mr. Root—That all depends upon whether you carry them to an out-apiary.

Mr. McCain—In the yard.

Mr. Root—Not less than three days. They will have to be shut up at least three days to get them so that they will get used to a new location. At the end of that time they will do very well. In the out-yard you can use them immediately.

Mr. Wheeler—Mr. Stanley is here. He rears queens and I have bought hundreds of them in the last year and he has a very unique and fine way of rearing them, and he will exhibit for you any time you want him to in the back room. He does not care to come before the assembly and speak; but there is one thing I can assure you he rears good, lively queens, and the bees take them, and they lay, and they are a good color. He is one of the largest bee-keepers in the State, I understand; he represents about 700 colonies. Such men as that are men that work as well as talk.

Pres. York—Has Mr. Stanley anything to say on this?

Mr. Stanley—No, not unless anyone wishes me to talk.

(Mr. Stanley was requested to explain his method of rearing queens.)

Pres. York—While Mr. Stanley is getting ready I think we may take up a question or two.

SHOOK-SWARMING.

"How many present think shook-swarming a preferable and practical method of management?"

Mr. Whitney—That would depend largely upon circumstances.

(Pres. York called for a show of hands on the question. The request was complied with.)

Pres. York—It would be preferable, I think. There were four I think who raised their hands.

Mr. Wilcox—How many have an opinion concerning the subject and know anything about it?

Pres. York—Do you mean how many have tried it?

Mr. Wilcox—Yes.

Pres. York—How many have tried shook-swarming? Raise your hands. (About 10 responded.)

Pres. York—How many think it is preferable to all other methods? Raise your hand. (One responded.)

LAWS ON BEE-KEEPING.

"In what respect does the law of Cook County differ from the State laws relative to bee-keeping?"

Pres. York—Does anybody know of any different law in this county from any other county in the State?

Mr. Moore—There are no laws in Illinois except State laws which are applicable to every county in the State. There are no County laws.

Pres. York—Are there any ordinances in the City of Chicago relating to bees or bee-keeping?

Mr. Moore—There have been ordinances made in certain places in the State against keeping bees within certain limits.

Mr. Pease—We have in the ordinances of the City of Chicago, an ordinance that bee-keepers do not care to discuss very much, as a rule. It is still one of the ordinances. It is to this effect, prohibiting the keeping of bees within 200 feet of a public highway or alley. That ordinance is still in effect although it has never been enforced. There has been no litigation on the subject whatever. There has been considerable controversy among some of the bee-keepers of Cook County to have that ordinance repealed. As to the legality of it, it is a question as to whether it would be sustained or not. It is in a measure conflicting with the State Laws as being rather class legislation, and there has been a strong inclination on the part of many of the bee-keepers of Cook County to have that ordinance repealed. Philadelphia had a similar ordinance which was taken into Court and contested and carried to the Supreme Court of the State and there found unconstitutional. I suppose that is what is referred to by this question.

Mr. Moore—I am certainly instructed by the gentleman's authority, which I take for granted is correct, that there is an ordinance in Chicago on keeping bees within certain limits, but it has given us so little trouble that we didn't know there was such a thing. It would take $500 or $1.000 to wipe it off the statute book. No legislation of that sort is going to give us any trouble either now or in the future, judging by the amount of bother it has been in the past; it might as well stay there, as there has been no attempt made to enforce it.

Mr. Abbott—I am not a lawyer, but whenever there is any specification regarding keeping bees a certain distance from any place I pay no attention to it whatever. It cannot be enforced in any State in this Union. That belongs to the common principles of law that underlie all law. Every law must be specific and must apply specifically to all the people engaged in that industry.

Mr. Kimmey—Suppose you lived next door to a church and should insist on keeping a row of bee-hives right along side of the church, don't you think there is power in the municipal power of a city to control that matter?

Mr. Moore—This matter has been threshed over at very great length. The law of nuisances covers a great many of these things. There is such a thing as a public and a private nuisance. No man would claim that keeping a cow was a nuisance, but in a city where people live close together you can keep a horse or a cow in such a way as to become a nuisance. It may be a private nuisance, it may be a public nuisance. The whole neighborhood is interested in having it abated, in which case there is appropriate remedy. Keeping bees or chickens is not a nuisance, but they may be kept in such a way as to become an awful nuisance. Then there is a remedy for the people aggrieved, at law.

Mr. Kimmey—Don't you think there is a remedy with the authorities. Has the pastor of a church got to go to law? Why can't he ask that there shall be a reasonable ordinance passed to control those things?

Mr. Moore—It is not necessary to pass an ordinance. If the church authorities are agreed, the church authorities as a corporation can maintain an action for specific nuisance.

Mr. Kimmey—Your argument would abolish all law. I don't believe that we should take the high and lofty position that we can keep bees wherever we please, regardless of everybody and anybody. When we do I believe we will find ourselves subject to municipal legislation under the police power granted by the State of all municipal corporations.

Mr. Moore—If the Legislature or if municipal corporations attempted to make laws to govern everything, pretty soon they would be making laws telling you to have your picket fence so high, to keep your next neighbor's chickens out.

Mr. Kimmey—They do that very thing right here in the city of Chicago.

Mr. Moore—There are a whole lot of things that must be governed by common sense, and they have attempted to make general laws to remedy specific cases of grievance. There is always a law for specific grievance.

Mr. Stanley being now ready to explain his method of queen-rearing, the subject was taken up.

STANLEY METHOD OF QUEEN-REARING.

Mr. Stanley—I have a frame of queen-cells here.

Dr. Miller—How do you get those queen-cells started?

Mr. Stanley—Started as they are now? Do you mean grafted?

Dr. Miller—Yes.

Mr. Stanley—They are started with royal jelly and then the larva is grafted in. I made these myself.

Mr. McCain—Are those the ordinary Doolittle cups?

Mr. Stanley—No. This is a frame showing complete cells, some of them hatched and some of them not. At this stage that should be removed (indicating).

Mr. Kimmey—What would I do with those if I had them?

Mr. Stanley—If you wanted to save the queen I suppose you would put it in a cage until she hatched and then you could make use of it by putting it in a nucleus, the full colony.

Mr. Moore—Before these hatch you cover them with some kind of a metal cover.

Mr. Stanley—Yes. In introducing the cage it is supplied with a candy to liberate the queen at any time. They are kept warm with the heat of the colony in full colonies or nucleus.

Dr. Miller—Right down in the colonies?

Mr. Stanley—Yes; they are put right between brood-combs, one, two, three or four colonies.

Dr. Miller—I wish you could all see closely the beautiful workmanship of all of this. Mr. Stanley is a wonder as a mechanic. His work is beautiful.

Mr. Whitney—Do you mean to say that you can introduce a queen to a colony in one of those protectors—that is, a laying queen, and the bees not kill the queen?

Mr. Stanley—Yes, I can introduce a virgin queen into a colony and have the laying queen caged.

Mr. Whitney—With room for the bees to go in and out at pleasure?

Mr. Stanley—Yes, the bees can go in and out and feed their laying queen. Have your laying queen caged, and the virgin queen at liberty on the combs.

Dr. Miller—Would it do if there were a laying queen at liberty in the hive?

Mr. Stanley—You couldn't liberate the virgins. You might lose your virgin and you might lose your life.

Mr. McCain—In regard to fertilizing. You have quite a number of cells there. What is your method of getting the queens fertilized?

Mr. Stanley—I use a three-frame nucleus, standard size frame. I have tried the small one. I have had some failure and some success.

Mr. McCain—Do you introduce the virgins one at a time?

Mr. Stanley—One at a time.

Mr. Kannenberg—How long can you keep the queens after they are hatched in those cells you have there?

Mr. Stanley—I have kept one 34 days to see how long I could keep them.

Mr. Kannenberg—Without any honey? The bees will feed them?

Mr. Stanley—Yes.

Mr. Wheeler—Could you introduce them after that time?

Mr. Stanley—Yes.

Mr. Whitney—Could you introduce that virgin queen into the center of the hive where there is a laying queen, and not have any of these virgin queens killed?

Mr. Stanley—Yes; they can be cared for in the colony with the laying queen.

Mr. Moore—They simply can't get at them.

Mr. Stanley—Certainly.

Mr. Moore—They are protected by the zinc.

Mr. Whitney—The question is about the bees killing them.

Mr. Stanley—I haven't had any trouble with the bees killing them.

Mr. Wheeler—Do they ever attempt to ball them?

Mr. Stanley—No, I have never had any trouble with balling.

Mr. Wilcox—Would it not be better, in introducing them into a hive, to put them in an upper story with a queen-excluding honey-board?

Mr. Stanley—If there are bees enough it would be just as well; all they require is to be kept warm.

Mr. Wilcox—You supply them with food?

Mr. Stanley—You don't need to supply them; the bees feed them.

Mr. Wilcox—The bees will not feed the virgin queen?

Mr. Stanley—Yes, the bees feed the virgin queens while they have a laying queen in the hive. There probably are cases where they will not, but it can be brought about so that they will.

Mr. Wilcox—I have very often slipped a virgin queen in the hive with a laying queen, and found her dead afterwards. I thought they killed her or starved her to death.

RE-INTRODUCING A BALLED QUEEN.

"When a laying queen is balled in introducing, what method should be adopted to introduce her again to the same colony?"

Mr. Whitney—That comes directly in line with some practice I had a year ago, although I didn't ask that question. I introduced the queen to a queenless colony for a young lady who bought a colony of bees from me, and the next day or two afterwards she wanted to see whether that queen was accepted or not. She found they had eaten out the candy and the queen was liberated. I told her there was a little danger in opening that hive so soon, but if she cared to have me do it I would try to do so. I opened the hive and I didn't find the queen—I gave them a little smoke—I was afraid perhaps they had killed her. The young lady looked down into the hive at the bottom and she said, "Mr. Whitney, what is the matter?" I looked in and I said, "There they are balling that queen as sure as you are alive." I put my hand down and took that ball of bees out and shook them and there that queen was and they hadn't hurt her. I re-caged her and put her back and left it till the next morning, when I pulled the plug out and in three or four days the queen was all right.

Dr. Miller—There is just one part that might be added to what Mr. Whitney has said. He says that he introduced that queen the second time in the morning.

Mr. Whitney—No; I introduced her immediately.

Dr. Miller—About what time was it?

Mr. Whitney—About the middle of the day it was that we looked, and I introduced her again, but plugged up the cage so that she couldn't get out, and left her there over the frame till the next morning, and then carefully removed the frame and didn't disturb the bees at all.

Dr. Miller—That is the point—if you free her at a time when the bees are likely to be troublesome, in the morning. Any other time in the day you will not be quite so safe as if you free her just at night when there will be no chance for robbers or foreign bees to get in. In this case it is the queen with which you have had trouble, and you want to take more than ordinary care. So take the additional precaution to liberate her at night and you will be safe.

Mr. Wilcox—I thought perhaps there might be a word more said in regard to the manner of picking up that queen in the ball. He said he picked it up with his fingers and put it in the cage.

Mr. Whitney—No; I scooped the whole ball of bees up from the bottom of the hive with my hand and shook them out and the bees were very much surprised.

Mr. Wilcox—Sometimes a bee-keeper is, too! I could recommend those that are very timid to use a little table spoon and pick up the ball and throw it into some water.

Mr. McCain—In regard to the ball of bees, I would like to ask if it is a dangerous or unwise thing to smoke the ball.

Dr. Miller—Yes, and no. I take the smoke and I will warrant that one way I use it they will kill the queen, and another way I use it they will not hurt the queen. Hold the smoker off far enough so that the cold smoke comes upon them, and they will leave it about the same as they will when you throw them into the water. Get some bees in your fingers and hold the smoker up so that the smoke will be hot and see if you don't get stung. You will be sure to kill the queen if you blow hot smoke on it.

Mr Kimmey—I don't know anything about these matters, but I have had just a little experience. I got a queen, and found after she was liberated the bees had balled the queen in the bottom of the hive, and I picked it up and laid it on top of the frames and moved it a little, and it never occurred to me that they would sting me; and the queen flew away and I thought, "Well, surely she has gone." But I waited about an hour, or something like that, and I looked again and I found the queen back, balled in the bottom of the hive. I simply picked it up, from my previous experience, and carried it into a little building in my hands and then caged it there. I had a caged queen and the colony without any queen which I wanted to get that queen into. I didn't know what to do. I went back and hunted up all the old bee-papers I could find to get some information on the question. I don't know just what paper it was in, but it said to smear the bee with a honey and water mixture and throw it in the hive and it would be all right. I thought, "Here is a desperate case and I don't know what to do." I tried it and it succeeded, and that is all I know about it. I simply smeared the queen with that mixture and poured a teacupful right down between two frames and let the bees in, and it went on and made a good colony.

Dr. Miller—It may succeed next time, but maybe it won't.

Mr. Dadant—I think there is a great deal less danger than some people would think of bees stinging when they have balled a queen. I have never had patience to go after a pail of water to throw the bees into. We have found the bees ball and I was in too much of a hurry to release her to do anything like that and I never got stung. They are rubbing against one another and expect to be rubbed, and their stings will not hurt one another; they will hardly hurt your fingers. Our way to do it is to do it promptly.

Mr. Abbott—I would like to ask these gentlemen what they have queens balled for? I wouldn't think anything more about putting a queen into a hive and not having her balled than I would about picking a frame out. I think a bee-keeper hasn't learned his business that has them balled.

Mr. Whitney—If she were balled what would you do?

Mr. Abbott—She won't be. You might just as well ask me if my wife left me what would I do. She won't leave.

Mr. Kimmey—I would like to know what I did wrong. I simply put the cage in the hive and left it there, I believe, about 42 hours and found her balled in the bottom of the hive.

Dr. Miller—May I be allowed to interrupt and cut this matter short by asking that Mr. Abbott shall tell us what he can do so that there are never any balled queens or queens balled.

Mr. Whitney—Perhaps I can answer the question for Mr. Abbott. I don't believe he keeps any bees! [Laughter.]

Mr. Abbott—I used to have about 200 colonies when I was handling queens, but the question with me was, How your colony came to be queenless?

Dr. Miller—That is not the question. The question is, How does he do that he never has any queens balled?

Mr. Abbott—In the first place I don't have queenless colonies to begin with, when I want to introduce a queen.

Mr. Kannenberg—I had a colony of bees I wanted to Italianize. I got the queen out about two days before, and I left it queenless for two or three days. Then I looked to see when I put the queen in if there was—

Mr. Abbott—You followed the instructions of the bee-books and journals; you shouldn't have done anything of the kind. The way to introduce a queen is not to kill the old queen to start with. The way to do is to leave the old queen in the hive; don't interfere with her at all. When you get your cage with the new queen, uncover the wire so that the bees in the cage can get at the bees inside of it, and get at the queen if they want to. Leave it there at least 48 hours, then catch the old queen and kill it, and uncover the candy and cover up your hive as quick as you can. Just as soon as you find the queen and kill it don't spend another moment's time but get the frames back in as quickly as possible; uncover the candy, cover up the hive and go about your business, and pay no attention to them for two or three days; and when you go back you will find the queen laying every time, and never have one balled. If you kill the old queen according to the instructions in all the books, in nine cases out of ten you will have trouble and have them balled.

Dr. Miller—I have had queens balled a good many times when there was but one queen in the hive and none other had ever been in; they balled their own queen.

Mr. Dadant—There are many cases in which we have balled queens. I have seen hundreds of instances. I have had two swarms come out and each of the two queens balled because some of the bees of the other swarm were with that queen. I have had queens that I was about to introduce, balled before I had any time to do anything with them. I have seen young queens balled in the hive. Those things are accidents that happen in the bee-business, and the best of us cannot avoid them.

Mr. Root—I would like to agree with both gentlemen, but I think Mr. Dadant is exactly right. I also agree with Mr. Abbott on his method of introducing queens. We have been trying that all the past summer and the plan is all right. Leave the old queen in the hive until you are ready to release the new queen. We have been doing it with our virgin and laying queens and it works better than it worked the other way. But the "A B C of Bee Culture" has been changed, Mr. Abbott, and our directions are changed to cover that. We introduce our virgins; we have three or four in a hive at a time, and we also have a laying queen. As those virgin queens begin to lay we take out the laying queen and leave the other in the hive, and when the other begins to lay we take her out. I think there is one point that has been dropped, and that is this question of scent of the bees. At the University of Pennsylvania I spent some three months a year ago last summer, and after working a long time at this problem the intention was to consider some problem of introducing. I remember Mr. Abbott had been trying to pound that thing into us, and we didn't believe it—

Mr. Abbott—For twenty years. [Laughter.]

Mr. Root—And Dr. Phillips takes the ground—and he has been studying this question very carefully—that this question of introduction depends almost entirely on the scent of the bees. If the bees are balled, and you handle that ball in your hand and get that queen in your fingers, the chances are that they will ball up again because that scent has been changed. The bee's sense of smell is very acute. If the scent is changed a little bit the conditions are different. They recognize her somewhat as a stranger. I have had queens balled in our yard. By picking up the queen and showing her to visitors and dropping her back, they will ball her. Sometimes a disturbance in the hive will cause them to ball her. But this question of scent plays a more important part in it than we bee-keepers have been in the habit of thinking. If she has the same scent as the rest of the bees she will be accepted. A little while ago Mr. Stanley spoke about putting virgin queens in a hive where there is a laying queen. If they have the scent of the rest of the bees the bees won't tackle them, but if the laying mother can get at those then there will be war.

Mr. Smith—Why do bees ball their queens? In my experience I find that there are two motives, one is to protect them and another is to kill them. I will illustrate: I had an Italian second swarm and a black swarm go together, and both queens were balled. The yellow queen was balled with her own bees; the blacks also balled their own queen. I liberated them and neither one was hurt. I introduced the black queen and she flew away. I introduced the yellow queen and shook the bees all out on the ground, and dropped her in among the bees as they went to the hive. She was introduced that way perfectly safe. The black queen came back and lit on the outside, and the yellow bees killed her. In the first place they had balled their own queen, which I think was for protection.

Mr. Abbott—I want to say I didn't mean my remarks to apply to these abnormal conditions of two swarms going together or anything of that kind. I want to be rightly understood. I just let them go together and let them fight it out. I don't fool with them.

Mr. Smith—If you alarm a colony they will sometimes ball their queen. That is to protect the queen.

Mr. Root—Shut the hive up and they will be all right.

DISPENSING WITH THE BEE-VEIL.

"Generally speaking, can the bee-veil be dispensed with? How many think it can?"

Mr. Smith—I would like to see a man go through 40 or 50 colonies in the honey season without a bee-veil.

Mr. Dadant—There are a few gentlemen here that get along without bee-veils but if they wanted to follow some of us all day among the bees and not flinch, stay right with it, they will wish they had a bee-veil, unless they are absolutely proof against the sting, and there are very few that are. When you have a bee-veil you don't have to wear it all the time, but you have it at hand so that you can wear it if you have to.

Dr. Miller—I may say in regard to that, that there are men who do not use a bee-veil at all. There was one of them went in one of my apiaries; he went around with me with a smoker and he said, "They will never sting me; there is no need for me to wear a veil." And he kept that smoke going all the while, so I couldn't have any use of the smoker. I won't give you the man's name because I am afraid it might hurt the feelings of his son Ernest. [Laughter.]

Mr. Whitney—There was a friend of mine who said he didn't need a veil. He was extracting a great deal of honey. He sold the honey around through the community. I didn't know anything about bees then, and he invited me into the yard where he was taking off some frames; and he said, "They never sting an honest man." I went in and stood around the hive and pretty soon a bee struck him right over the mouth. I said, "I guess you're right." [Laughter.]

Mr. Moore—If any one really wants to handle bees without a veil he can do it. I have been engaged in marketing honey in Chicago, and for the sake of advertising I have done a great many outlandish things. I have attempted to go into my own hives and other peoples' without the bee-veil. The past summer I didn't carry a veil with me except on one or two days. I opened the hive without smoke. But I want to tell you right now, I got stung on one occasion twelve or fifteen times because not wearing a veil. If you are so patriotic, all right; but as a rule it pays to have a veil.

Mr. Whitney—A friend of mine in Ohio has been able to handle his bees without a veil for years. At one time he thought he would look into one hive and he took off the cover, and they came out. He backed up and held up his hands and they still came. He turned around and ran down the outside cellar-way and shut the trap-door, and he was stung so badly he fainted away and was sick for three weeks. Since then he hasn't been able to handle bees at all. A lady friend said, "I always use a veil; never go into the yard without one."

"SHOOK" OR "SHAKEN" SWARM.

"Is it better to say "shook swarm" or "shaken swarm?"

Mr. Root—If Dr. Miller wasn't here I would say "shaken swarms," but in his presence I always say, "shook swarms."

Pres. York—I think we would better refer that to Mr. Hutchinson.

Mr. Hutchinson—I agree with Mr. Root on that question.

Dr. Miller—If that thing is entirely to spite me, I am going to say a word about it. I am very glad of an opportunity to say a word in favor of having people at large understand that bee-keepers are not a lot of ignoramuses. I have felt mortified at the use of that word as a violation of common English, that a teacher in any one of our public schools would know better than to countenance. If either of these good brethren who have such a vicious feeling towards me can give me any possible reason why the word "shook" is any better than the word "shaken," they can give me something I have never had yet. The word "shook" expresses something to me a little stronger than the word "shaken." When Mr. Root told me that, I knew that there was something that had shaken loose in his brain. If they have a seat reserved in one of these places, say in a concert, there will be laid down a little slip and on it marked, "Taken." Do you think I would feel any more secure of that seat if it was marked "Took?" [Laughter]. Now, I consider this, without any joking, of enough consequence that we should spend a little time upon it. If there is any reason why "shook" is better than "shaken" I would like to hear it. One is good English, the other is bad, and it seems to me that is enough to settle the question, unless you can give some other very strong reason.

Mr. Dadant—In regard to this matter I think there is a great deal in locality! [Laughter.] I am foreign born, but when some of our Western Americans took a trip to Europe I was with them, and I had occasion to say to an Englishman, "Hurry up," and he said, "I suppose you mean "make haste."

Mr. Whitney—When I saw the words "shook swarm" I thought the whole thing was wrong. What is a swarm? It is bees in the air or in cluster. Then you can't make a shook swarm or a shaken swarm. It is simply a colony of bees. You can't shake them or have them swarm in the air or cluster, so that it is not a swarm at all.

Mr. Wheeler—I would like to know of how much money value this is to us. We are here to learn something. I didn't leave my work to come here to listen to sport. I came here to learn something about bee-keeping. Now what does this have to do with bee-keeping?

Mr. Abbott—I used to teach school and they paid me $50 a month for teaching their children the correct use of the English language. It must have had some value to me. But I disagree with Dr. Miller that the use of the word shook is not as correct as shaken. This is simply the invention of a new condition of things, and new conditions of things are creating words and phrases every day in America. I suppose I could mention 50 that have been created within the last few years. It is just as proper to apply "shook" to a new condition of things as "shaken;" and the words got into Dr. Miller's dictionary that way.

Pres. York—This is one of the questions for diversion. Now we will go on to something more solid.

Mr. Wheeler—We have editors, such as Mr. Hutchinson; leave such things to him. We don't want to spend our time here to-day on that. He will put that word in just as he pleases when he gets home, anyway.

ADVANTAGE OF SHOOK SWARMING.

"What is the advantage of shook swarming?"

Mr. Hutchinson—I suppose primarily that the principal advantage of this shook swarming is that we are able to have the work gone on with without being there to see to it. We forestall swarming. We make preparations for the bees to swarm and we are not there to take care of them, so instead of that we go at it and shake them off and make the swarms while we are there to see to it.

Pres. York—What about joining the National in a body this year?

Dr. Miller—Moved, duly seconded, that this Association join the National in a body, at the rate of 50 cents a member.

Pres. York put the motion which, on a vote having been taken, was declared carried.

Dr. Miller—Right in connection with the point which is before us is the question of uniting with the State. If it is a proper thing to bring that up now I move that this Association, as a body, unite with the Illinois State Association, paying into its treasury 25 cents per member.

The motion was seconded.

Mr. Colburn—What is the present membership of the Illinois Society?

Mr. Smith—The present membership of the Illinois State Association is over 150.

Mr. Wilcox—How many bee-keepers' societies are there in the State of Illinois?

Mr. York—I think there are two besides this, outside of the State organization, that is, the Northern Illinois and the Western Illinois.

Mr. Whitney—I want to ask the Treasurer as to what effect taking 25 cents for each member joining the State would have upon our balance in the Treasury?

Mr. Moore—There would not be enough money left in the Treasury to support our Association if we paid out 75 cents on each dollar, that is, 50 cents to the National and 25 cents to the Illinois State. The actual expenditure for membership if this motion is passed, under our Constitution, will be about $20 out of our treasury.

After a long discussion Pres. York put the motion that this Association join the Illinois State Association in a body by paying 25 cents a member, which, on a vote having been taken, was declared carried. The necessary amount to pay same was secured by passing the hat.

ELECTION OF OFFICERS.

The President appointed as tellers Messrs. Fluegge, Jacob and Dadant. Ballots were taken and the officers were all re-elected as follows: President, George W. York; Vice-President, Mrs. N. L. Stow; and Secretary-Treasurer, Herman F. Moore.

QUEEN'S WING AND LEG GROWING.

"Does a queen's wing ever grow again after being clipped?"

Dr. Miller—No.

Mr. Criggs—Does a queen's leg ever grow where a leg has been pulled out?

Dr. Miller—No.

Mr. Criggs—I was clipping a queen's wing one time with gloves on, and I didn't have a very steady hand, and in some way pulled off one of the large legs right to the bottom. I was sorry at the time, but I thought they had so much brood and eggs they could rear another queen. However, I kept close watch and they didn't rear another queen to take her place, but this queen in the course of another two weeks had another leg.

Mr. Wilcox—Did her progeny have a missing leg, too? [Laughter.]

Mr. Criggs—I didn't find any that did.

Dr. Miller—I would rather believe a clipped queen got into that hive from another hive than to believe the wings or leg would grow on again. That has sometimes happened. A clipped queen has gone from one hive into another.

Mr. Criggs—I should say not. This was a pure Italian queen and all the other queens within two rods were dark. I had only half a dozen Italian queens in the whole apiary of about 60 or 80 colonies; the rest were all dark bees.

Mr. Whitney—Was that a queen of your own rearing?

Mr. Criggs—No.

OUTDOOR WINTERING OF BEES.

"In outdoor wintering is water running out of the entrance of the hive an indication of poor wintering?"

Mr. Wilcox—I should say not, but it indicates poor preparation for wintering. There ought to be absorption enough so that it wouldn't condense and accumulate.

Mr. Snell—That has been my experience. If the ventilation is proper, and the preparation is proper for wintering, there will be no water running out from the entrance.

STARTING WITH BEES.

"Tell a few good ways for beginners to get a start in bees and a first-class experience at one and the same time."

Dr. Miller—Buy a colony of bees, buy a bee-book, or several of them, and subscribe for a bee-paper, or several of them, and then go on and get your experience.

Pres. York—I noticed that the Doctor didn't say he could buy his experience, too.

Dr. Miller—He will buy it and pay for it.

EFFECT OF MARKET REPORTS ON HONEY PRICES.

"What effect has market reports on the price of honey?"

Mr. Burnett—I don't know that I ought to answer or endeavor to answer that question. I make some market reports. What effect it has, has to be problematic. I think, however, it is in general alignment with all other reports on prices. People are guided by what they find to be a price in a certain market. It gives you an idea of what goods can be obtained for there. It is also a guide for those seeking a market. I should think it had a good deal to do as a matter of fact with the general business of the country.

Mr. Colburn—I am a resident of Chicago and I asked that question because I wanted to find out if there is any difference, or if it had any appreciable effect; and the reason I asked it is, I have been on South Water Street a good many times and I always found on enquiring there that the prices of honey were invariably greater than these market reports give us to understand. Why that is so I don't just know. I think I know the South Water Street houses pretty well. I was a grocer here in Chicago for a number of years and went all around the streets with my market wagon on every day in the summer, and every other day in the winter, and I found things down there were quite peculiar. This fall I examined up and down the street on one or two days and I found at that time five different firms reported honey as selling at 15 cents a pound in one-pound sections. At that time our market quotations—the nearest was within seven days—gave us prices at 12 to 14 cents. This is what I don't understand, and I want to understand it. Every bee-keeper within 300 miles of Chicago who sends his honey here, if he takes these papers, naturally is enquiring and looking at these reports, and these reports ought to be reasonably accurate. At the stock yards, with which I was familiar for a number of years, the market reports give the actual sales as they are. They don't say, "We quote so and so." They say, "Armour bought so and so, such and such a kind of stock, and it sold for so much." I think our market reports ought to be under the control of this Association, on account of the fact that there is such an apparent discrepancy between the reports in the papers and the actual condition on the street. We as individuals who are bee-keepers are interested in having prices at a reasonable figure, and we don't want any market reports which show the prices of honey to be less than it is generally sold at. Whether they are, or not, I can't say, but I think they are. In every investigation I have made I have invariably found a difference of one or two cents in the reported price of the honey from the price on the street. In the quotation from Milwaukee it is from one to two cents higher than the Chicago market, and yet Milwaukee is 200 miles nearer the great center of honey-production than we are. I brought this up because I think the bee-keepers will lose two cents a pound on every pound they send to Chicago unless they get straight market reports.

Mr. Wilcox—The question is, What effect do market reports have on the honey market? If they be timely and truthful they tend to steady the market, to prevent fluctuations, and are highly profitable to all.

Mr. Moore—There isn't any use in allowing any prejudice to enter into the discussion of these questions. I know a good many people think that all lawyers are thieves, and all commission men in the same class. They are very much like the rest of us; they are all honest and all dishonest. But according to Mr. Colburn's own statement there is no discrepancy. He said the market report gave 12 to 14 cents. Twelve meant the lower grade, 14 meant the highest grade. Understand that those quotations mean some considerable sale. You go along and ask a man what is the price and he says 15 cents. He thinks, to look at you at first, you are a suburbanite, come to carry honey home under your arm. If you say, "Here, I want five or ten cases," he gives it at 14 cents, according to the quotation that you say was quoted. There are different circumstances. Quantity and quality of purchase make a difference as to quotations, as you state it, and are fair.

Mr. Burnett—As to difference, I would like to have him change the word invariable to variable. It seems to me it is hardly fair that it should be invariably higher than the quotations. As a matter of fact we all know that is not the fact. That buying honey, as he buys it—perhaps he met a man who buys from the receivers. The majority of the houses on South Water Street that sell honey in a small way or keep a few cases, buy it from some of the receivers, and they need to get a cent a pound as a margin over and above what they pay. The purpose, as I have understood for many years, of market reports, is to give as nearly as may be the actual value of honey sold as received. A lot of honey sold consisting of 25 or 100 or 1,000 cases is the price that the purchaser must be guided by. Allow him to send the honey here and get a cent a pound less than the quotations are for that grade of honey, he feels that he has not had the market value for it. So that it is not fair to any one to say that it is invariably so, but that it does vary is a fact.

Mr. Fluegge—I find the market quotations in Chicago given out as nearly correct as they possibly can be. I visited a number of grocerymen and they informed me that the prices they paid for first-class honey were 14 cents a pound, and that is comb honey. That is what the quotations are now. I have been watching it for several years and there is very little difference between what the grocerymen say and what the quotations are, so I think they are as nearly correct as we can get them from that standpoint.

HORIZONTAL WIRING OF COMB-FOUNDATION.

"Can brood-frames filled with full sheets of foundation be wired horizontally in a manner that will prevent buckling?"

Mr. Dadant—If we wire foundation at all, I believe as a general thing those who do wire put their first wire too low. The weight is at the top—the pull is on the top story; the cells are nearest to the top of the frame and the first wire should be put very close to the top, within an inch. When you come to the bottom of the frame, those who have handled foundation for years, know that those cells are hardly ever stretched, and there is no need of wiring below the middle of the frame. If you put one wire at the middle and the other two above, you will have better success than if you put the wires within your space in the frame.

Dr. Miller—I would like to ask Mr. Dadant a question I think germane to the subject. In those, do you suppose that the wires are taut or slack?

Mr. Dadant—It would be better for the wires to be taut if they are pressed into the foundation. A slack wire is only supposed to follow the wax if it settles. The great trouble is giving it to swarms. When full sheets of foundation are given they sag at once before it is finished; that is the time when it is really more of a strain upon it than is natural with the comb, because bees build their combs entirely at the top before they lengthen them, but when you give them a full sheet they will load it from the bottom, and the top has a greater strain upon it, and I think nearly all the strain takes place from that. I think the wire ought to be taut, but in a great many cases it is not necessary at all if it is carefully done to wire.

SIZE OF COLONIES OF BEES IN SPRING.

"How much brood, honey and bees should there be in a hive in the time of fruit-bloom before putting on supers?"

Mr. Wilcox—I am confident that the answer to that will vary according to the locality somewhat. For my part I never put supers on during fruit-bloom. Then, the quantity of bees cuts no figure. If there is not surplus enough coming in our locality at that time to make a decent start, I always divide them, if they are strong enough to bear dividing without being weak colonies, when clover opens in the middle of June. Fruit-bloom is in the middle of May, and if there are two bushels of bees I would divide them; if there was one bushel I would divide them; if there were 10 pounds of live bees I would divide them and give the other half a young queen, but I would build them both up for the honey harvest the first of July or the latter part of June. Our best honey-yield comes in August, from wild flowers. Consequently I would be sure, anyway, to have more bees to gather more honey later in the season.

PREVENTION OF ROBBING DURING A HONEY-FLOW.

"What can be done to prevent bees from robbing in the honey-flow season?"

Mr. Hutchinson—You couldn't make them rob then.

Dr. Miller—They can rob. The way to stop them is to take away the fool bee-keeper that gets them to rob.

Pres. York—He ought to be clipped!

EXTRACTING FROM COMBS HAVING BROOD.

"Will extracting from combs containing unsealed brood injure the quality of the honey provided no brood is thrown out?"

Mr. Wilcox—No.

Mr. Burnett—A gentleman here has the idea with regard to that brood, that it has a tendency to sour the honey. If there is any such thing it is important. It may be one of those things that is an unknown quantity to us. We often find in a consignment of honey, there are one or two packages that will ferment, and the rest show no tendency to do so. As dealers, and finding so many instances of that kind, we are quite at a loss to know what is the cause of it.

Dr. Miller—I should say yes to that question; if you had obliged me to say yes or no just at first blush I should have said no, but thinking more carefully over it I should say yes, because if you put brood-frames—and by that we generally understand combs containing brood—into an extractor you most surely will have unripe honey in that, and when you throw unripe honey out you are likely to injure the quality of your honey, and that may account for the kind of honey that Mr. Burnett is talking about.

Mr. Wilcox—I think it is terrible to throw out unripe honey, but it does not follow just as he expressed it, surely.

Dr. Miller—Almost surely.

Mr. Dadant—I have had considerable experience in the matter of extracting honey. I must say, in the first place, it is not advisable to extract honey from combs containing young brood; and in the second place I believe Dr. Miller is right; if you do that you are extracting in the beginning of the season and you will have thin honey. If you extract at the end of the season from brood-combs that contain brood and sealed honey the brood will likely be sealed also. Therefore it is unlikely that the bee-keeper who wants good honey will extract from brood-combs containing unsealed honey. If it contains any he can throw it out without throwing any brood out. Those who are expert enough can make it in such a manner that it moved the larvæ a little forward when it was extracted and this larvæ could work back after the comb was taken back to the hive, or the bees would take them back, and yet none of them were thrown out. But you don't want a careless boy to turn the extractor, because a little too fast whirling will throw the brood out, and then you have a chance for fermentation. Although, I believe very ripe honey will not ferment even if it has brood in it. The ancients tell us they used to preserve bodies in honey, showing that honey will keep things from rotting. I believe that bees and larvæ will be preserved in the honey if the honey is ripe, but if the honey is unripe it will be sure to ferment, whether you have dead larvæ in it or not.

Mr. Wheeler—I have had a suspicion of that thing for quite a number of years, and the more I have watched it and studied it, the more I have made up my mind there is a great deal in it. You not only throw out the honey, but the food that is given to the bees, that sours the larvæ. One has to be very careful in extracting. Another point Mr. Dadant makes about the honey season being at a close; we don't have such a thing around Chicago where there is sweet clover; honey is gathered so that they can continue to breed and have young bees at all times. If you extract from those combs that have brood in you must have young larvæ. And then those young bees have a liquid: they are floating in a liquid. If that liquid is thrown out it is my impression it floats on top of the honey and it sours and gives the smell of sourness to the whole dish of honey. Yet I believe the honey down underneath is just as sweet as it ever was.

Mr. Wilcox—You don't believe that is thrown out without throwing out some brood?

Mr. Wheeler—That is immaterial. We do throw out the brood. I think you throw out some of that liquid when you don't throw out the brood.

(Continued next week.)

Honey as a Health-Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food", written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey". It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey the more honey they will buy.

PRICES, prepaid—Sample copy for a two-cent stamp; 50 copies for 70 cts.; 100 for $1.25: 250 for $2.25; 500 for $4.00; or 1000 for $7.50. Your business card printed *free* at the bottom of the front page on all orders for 100 or more copies. Send all orders to the office of the American Bee Journal.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Outdoor Suitable Work for Women

Dear Miss Wilson:—As each week I read the interesting chats our "Sisters" give us, I most energetically want to "talk back," but, like Helen Keller, my hands being my only mode of communication, and they being otherwise pretty fully employed, I have been unable to do so. However, this special corner of June 22 is too attractive to let pass, so "here goes it."

In "Convention Proceedings" (page 439), Mrs. Wingate speaks of the Rural New Yorker's request for suggestions in regard to pin money for a "home-tied farm-girl 20 years old." I noticed that paragraph, and thought of suggesting bees, but it seemed foolish to do so, as any country girl should not need to be told the money-making abilities of either bees or poultry. A girl without sufficient observation, or "get there" resources, to carve out a lucrative line for herself in rural occupations, will not usually succeed in carrying out others' suggestions. In fact, I looked on the inquiry as manufactured to draw out unique, interesting and useful "pin money" opportunities.

Our country and farm girls are too bright and resourceful to need outside suggestions. But, of course, there are many ways to help "make the wheels go 'wound" that a timely hint opens our eyes to, and which such answers as the Rural New Yorker's inquiry opened the flood-gates for, are most timely and helpful.

Again, Mrs. Wingate's comparison between our comfort in knowing our bees are safely housed, and to "don waterproof and rubbers, if they're handy, and if not march out without them, to chase some half-drowned chickens or turkeys that have been foolish enough to leave their mother's wing," is most killingly true. There is simply no comparison between the work of the two occupations, or the expense.

A friend of mine has made a careful estimate that it takes 1000 White Leghorns to support modestly two people. The initial expense of housing, feeding, etc., such a flock is a serious one. And the care! The same party says—and I think with truth—that there is no branch of farming, developed as a specialty, that so employs, at its utmost tension, every faculty the human body possesses, mental and physical.

As a rule, I think it's best not to put "all our eggs in one basket," or to depend for our income upon just one branch of "home industry;" but to keep some bees, and some poultry, and some small fruit, and make each the best of its kind possible. This gives a variety of interests, breaks the routine and drudgery, and insures every year a fair return and income.

Now concerning women managing bees alone, "I hae me doots" as to its being practicable for the "average American woman." And this because housekeeping, (which includes "Bar le Duc Preserves," and such like, I suppose, which seems to me a simply *dreadful* undertaking!), serving, social and church duties pretty well "tuckers them out," and they haven't much energy to lug around honey and manipulate bees. Of course, 5 or 10 colonies is a quite different matter, but take 20 to 40 colonies and there is considerable manipulating to be done, take the season 'round.

While I can manage 80 colonies for extracted honey with a helper, my hands are too weak to do really any very efficient work among the bees alone; so perhaps I am not a fair judge of the situation. At the same time it should be encouraging to invalid sisters to know that with the help of a small boy our returns are some years over $800 from our bees, and this in a rather poor section for flora, and where prices are low for honey—5 to 9 cents being our best.

Well, "We've got a swarm!" so good by all, and best wishes for "a big harvest for us all this summer."

Frances E. Wheeler.

PS.—Figuratively speaking (of course), I would like to "pat that brother on the back" who, on page 438, talks so sympathetically of the saving of weak colonies, and gives such useful, helpful advice. F. E. W.

Miss Wheeler knows what she is talking about, as she keeps both bees and poultry, and her interesting way of talking about them makes one wish one could be clad in a cloak of invisibility and tag her around at her work to watch her for a day.

While bee-keeping has its rosy side, the darker side must not be supposed to go altogether with the chickens. If you keep enough bees there is many and many a time those same "rubbers and waterproof, if you have them handy," will be called into service; if not, you will have to get along without them. Even worse than working in rubbers, with the bees in no amiable temper, and crawling over you where you'd rather not have them—still worse, it is to have the weather so bad for a day or more at a time that you can't go near the bees, and yet you feel there's work that *must* be done, or things will get into such a snarl that you'll be swamped.

Fortunately, all tastes are not alike, and enough will be found of varying tastes to fill the different occupations. It would be bad if all the sisters should take to bees, and leave the biddies to take care of themselves.

"Essence Honey"—Another Fraud

Karo Corn Syrup is not without a competitor as being better than honey. The writer received a circular laying before the public the discovery of "3 flavors that will gain you fame;" "their equals unknown to science." One of them attracted attention at once, being thus described:

"Far Ahead and Cheaper than Fresh Honey. Essence Honey. $10 per gallon. Nothing like it in the world for candies, artificial honey, liquors, etc."

With visions of "fame" to be gained by the use of this wonderful discovery, as well as a fortune to be acquired by supplying the market with a superior article of honey, inquiry was made for full particulars as to how this "far ahead" honey was to be made. The reply was as follows:

"Dear Madam:—Take 80 percent glucose and 20 percent rock candy syrup; after mixing this then mix 2 ozs. Ess. Honey to every 100 lbs. Color with yellow to suit yourself."

There you have it, sisters. No longer any need to endure stings and hot suns. Make honey winter as well as summer. No failure of seasons. No danger of overstocking. No one who has ever had a good taste of glucose, with its lingering taste reminding one of an old brass spoon, would be willing to go back to the behind-the-times article got together by the bees!

In one respect the directions are a trifle vague: "Color with yellow to suit yourself." But that gives room for original experiment, and you can only tell what "suits yourself" by trying successively carrots, chrome yellow, aniline dyes, etc. There is a possibility of improvement also by varying the proportions of the ingredients. So large a portion of rock candy syrup (of course granulated sugar would not do at all) must have a weakening effect upon the delicious flavor of the glucose. Why not make it 99 percent glucose and 1 percent rock candy syrup?

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

EXTRACTING SMALL QUANTITIES OF WAX.

I can bear witness that for neat and convenient extracting of small charges of wax a kink in the plan given by Robert West is excellent. Press all the refuse down with a perforated follower, and let the whole establishment get cold before removing the wax. Mine was a much smaller arrangement than his, and I used it very diligently and often. Not been used lately. Page 443.

SAWING OFF THINGS WITH SWARMS.

Comrade J. Kimball, it seems, felt compelled to pull up an evergreen-tree to get the swarm clustered upon it. If he keeps on he'll yet be compelled to saw off the leg of a sleeping man for the same reason. Page 423.

FEEDING BEES—SAGE FAILED TO BLOOM.

It appears that in famine time, in a mild climate, careful feeding of each colony individually saves practically all the colonies, while open-air feeding, much less work, still lets quite a percent of them perish—looking in fact like a case of not energy enough to get out and appropriate the feed. The demise of a thoroughly worthless colony may be considered as some gain as well as some loss; but a salve of that kind is hardly strong enough to cure the sore when the loss is 50 colonies out of 200. Think I should want to try a compromise system. Of course, the colonies that need least will get most; but with perfectly and easily movable frames all around it ought not to be a hard job to exchange a few frames between the feeble folk and the bloated bondholders. Then, after a time (in the style of the Irish communist), "faith, and we'll divide agin."

And Mr. Dayton furnishes us another case of the ever-occurring unexpected, in that sage (never known to do so before) entirely failed to bloom last year. Queer. And yet a well-marked member of the numerous family that Mr. Queer, the cousin of Adam, has sent down to us. Page 422.

QUEENLESS BEES PERSECUTING VIRGINS.

Doolittle also accuses queenless bees with persecuting caged young virgins. And bees with a queen he finds much inclined to the same trick. Avoid the whole thing as much as you well can. Page 421.

PROF. EATON'S HONEY DEFINITIONS.

I think Prof. Eaton's honey definitions to be exceedingly good ones, and hardly have any suggestions to make. Page 419.

KEEPING QUALITIES OF HONEY.

Glad to see we are getting to the truth about the behavior of honey when kept for considerable periods. The tiresome falsehood usually told in the past about honey "just as good as ever," shows signs of playing out. "Good riddance" to it! Page 419.

RULES FOR BEE-ASSOCIATIONS.

I am not sure it would be advisable for us to adopt the Australian rules for our associations; but I'm quite sure it will do us good to *consider* that men of the same race and general objects as ourselves have found such rules advisable. Those whose interest in us is mainly in shearing us are sometimes favored too much—and also they *might* be proscribed too severely. Page 420.

THE "CLOISTERING HIVE" IN WINTER.

Mr. Dadant is right, that in our climate it is better to let winter bees fly when they can (and suffer real losses from chilling and snow-shine) rather than to try to restrain them of their liberty. Nevertheless the Cloistering Hive is interesting. It should do us *some* good to study up the ingenious devices of our fellow craftsmen of other lands. Giving bees air through perforated tubes darkened at the ends is a nice way. I'm not sure but some of our manipulations might borrow it. A lot of hollow weed-stems not quite large enough for bees to crawl through is also an ingenious air-supply when hives are to be closed in with cow-dung. Why cow-dung instead of mud? Mud, when perfectly dry, is a tolerably good bee-wall; but it reabsorbs water too easily. Every rain makes it wet. Cow-dung, when it does get dry once, resists water nearly as well as a board, and being lighter than a board, it holds more air, and is probably warmer.

Having such a nice arrangement for shutting bees in might very easily make the bee-keeper a hobbyist on that subject—be shutting them in at odd times all summer. And here's a question possibly profitable for our experts to butt their heads against: Would frequent shutting in through the summer get them so habituated to confinement that the winter's shutting in would do little or no harm? I'll venture the guess that most colonies (not all) could have their restlessness greatly mitigated that way—but not entirely cured probably. Page 405.

Reports and Experiences

Prospects Poor in Colorado

The first crop of alfalfa has been cut, and although bees are very strong not a pound of comb honey has been produced. Many bees are starving, and many are trying to rob those that are weak. It looks now as if the price of honey would solve itself, though I am sorry to see things in their present condition.

The weather has not been favorable for the secretion of nectar. It has been cool and quite windy, with very cold nights. Grasshoppers are playing havoc with the sweet clover. I have but little hope now of a honey crop. W. S. BEVERLIN.

Delta Co., Colo., July 7.

Good Yield from One Colony

I have 80 colonies of bees, 40 at one yard and 40 at another. I took 46 pounds in 13 days from one hive while it was rainy weather. I have doubled up my colonies now.

JOHN GERTHOFFER.

Onondaga Co., N. Y., July 21.

A Peculiar Honey Season

The present honey season is in more than one respect a peculiar one. The copious rains during the first 3 months of the year produced an extraordinary growth of shrubs and bushes, at the same time causing great hopes for an unusually large honey-crop to spring up in the hearts of our bee-keepers. The honey-flow from black sage started in with full force, and in years there had not been seen such a glorious bloom of this wonderful honey-producing plant. Those bees that were in good condition (having been fed as late as March) profited well and carried in considerable honey, which, it must be said, was of rather thin quality. Unfortunately the weather was not very favorable—too cold, and dry fogs prevailing, and preventing the bees from making wax. Soon reports came, that in general the hives were honey-bound, that the bees were loafing, and it was rather difficult to start them to working in the supers for comb honey. This state of things lasted all through the months of May and June, and thus it happened that not so much extracted honey, and still far less comb honey, was produced than might have been the case. The swarming-fever started in rather late, but when they began to swarm rather large swarms were cast off, and many an apiarist has more than doubled his number of colonies.

This month, up to date, we have had only 6 bright mornings; also a few rather hot days, the temperature running up as high as 100° F. When the black sage stopped blooming—which was sooner than expected—there was a lull for over 14 days, when the bees became rather cross and difficult to handle. White sage bloomed all right, though not so well as desirable. At present the bees are working hard on sumac.

We therefore might say that the present honey-crop, though by no means as large as anticipated, will still be above a medium average; that is, as far as extracted honey is concerned, while it will be far below half in comb honey. MAX BOELTE.

San Diego Co., Calif., July 17.

Clover Crop Cut Short

I have 40 colonies of brown bees. It was so dry here during June that the white clover crop was cut short. Bees are at a standstill now. E. G. GUTHREY.

Saline Co., Mo., July 3.

Splendid Work of One Colony

I started last spring with one colony of bees, it having wintered well, and in April I bought one colony of 3-banded Italian bees, which did well. It cast a swarm the forepart of May, and the swarm filled 10 Danzenbaker brood-frames and 28 sections, and the old colony filled 36, making 64 in all. This they did in about 4 weeks, when the honey-flow was cut short on account of dry weather. But the recent rains have brought white clover into bloom again, and bees are going to work on it once more. I use the Danzenbaker hive and sections. FRED W. MANEKE.

Madison Co., Ill., July 20.

Rocky Mountain Bee-Plants and a Mint

I send samples of Rocky Mountain Bee-Plant (white and purple), also what I think is a species of mint. I would like to know what the name is. W. O. DARNELL.

Weld Co., Colo., July 8.

[We are glad to get samples of the Rocky Mountain Bee-Plant from its native home. The plant grows as far east as Illinois, but Prof. Cook, in "The Bee-Keepers' Guide," says it does not promise much for bee-keepers in the East. The other sample belongs to the Mint family, but has no common name except the ciliated Blephilia, which comes from the scientific name Blephilia ciliata. The whole mint family is famous for the fine-flavored honey which the bees get from it.—C. L. WALTON.]

Odors of Queens

I think any one with experience will agree with A. C. Miller, page 453, in regard to the reception of an alien, whether a queen or not, but will not agree with him on the odor theory. Why will the bees cluster on a cage that a laying queen has been in, if there is no odor? Why will they sometimes ball her when she has been handled? Two different odors—one pleases, the other makes them angry. I think there are two sure indications that odor is one of the principal factors in introducing. Where hives set close together bees *will* intermingle, and I think nearly every one laden with honey, or a very young bee, will mix with other colonies unmolested.

If you walk into a strange boarding-house and put down $10 for a week's board in advance, I think you would meet with as warm a reception as the little bee does with her pockets full, or the little infant that strays to the wrong door. They may have a full house, but will try to accommodate you somehow; it is so with the bee.

Give the queen plenty of time to acquire the scent of the hive, then let her in with as little disturbance as possible, is about the safest way. A. W. YATES.

Hartford Co., Conn., July 3.

Short Season for Bees

Bees are doing fairly well now on white clover. The season will be short on account of excessive cold and rain.

C. R. BRIDGMAN.

Lafayette Co., Wis., July 15.

Rains Injure the Honey Crop

We had an unusual amount of rain all winter and spring, and a good crop of blasted hopes in lieu of the big crop of mesquite and catclaw honey we were looking for. We generally get a second bloom of both in July, and hope to have it this season.

S. N. SALSBURY.

Cochise Co., Ariz., July 15.

Poor Weather for Honey Crop

We have had 5 days of good weather for bees to work (the last 5 days), and another good day to-day. Most of my colonies have 2 supers on. I have not taken off any honey to amount to anything yet. Cold nights and rainy weather have lost us 3 weeks of time. Our white clover has been a wonderful crop.

LISLE SCHNEIDER.

Delaware Co., Iowa, July 18.

Prospects for a Good Honey Crop

Basswood is budding out nicely, and the fields and pastures are entirely covered with white clover bloom, so if the weather keeps favorable we will have a good honey crop. Heretofore it has been very unfavorable. It has been raining more or less nearly every day for the last 4 weeks.

C. O. BERGSTRAND.

Polk Co., Wis., July 3.

Scarlet Sumac

What is the tree, a sample of which I enclose? It has clusters of blossoms from 3 to 6 inches across, and the berries are red and bitter when ripe. Is it a honey-tree?

NATHAN PULSIFER.

Aroostook Co., Maine, July 17.

[The tree or shrub is the Scarlet Sumac, Rhusglabra, the common name coming from the cluster of scarlet berries appearing in the late summer. All the sumacs are classed with the honey-producing plants.—C. L. WALTON.]

Poor Yield from White Clover—Foul Brood

A good many bee-keepers are located along the Mississippi River bottoms. The principal sources of honey are clover, heartsease, and Spanish-needle. White clover has been very plentiful, but the weather has been too cold and wet for a good honey-flow, and the yield will hardly average 25 pounds of surplus comb honey per colony.

Foul brood has secured a good foothold here, many yards being badly affected before the owners were aware of its presence. It took about 125 colonies from me in 2 years—nearly all—but I have now built up to 116 colonies, all clean and doing nicely, thanks to State Inspector Smith, who visited us last year. Mr. Smith also called July 1. He found a great change for the better in my yard.

The next day I accompanied him, as pilot, and we visited nearly all the bee-keepers about Fulton and Albany. We found foul brood in every apiary but one. Some yards were in pretty bad condition, but their owners will try hard to head off the disease following Mr.

Smith's directions, and we hope to make this section of country once more a prosperous place to keep bees.

I have tried to do some work among the bee-keepers here, and while I find nearly all of them willing to try to stamp out the disease, I also find a few old-timers who don't believe there is any such disease, or they say, "It will all disappear when a good honey-flow comes; I don't believe it is contagious," and make no effort to prevent its spread. In fact, they leave old, diseased combs exposed for the other bees to clean out. I found one old bee-keeper who would not let me look into a a hive in his yard of 60 colonies; he said they were working all right, and that was all he cared for.

How I would like to see a law passed that would bring such men to time—teach them that this is not a country in which each one lives for himself alone.

The progressive bee-keepers must keep up the fight for a good law, and some time Illinois will be classed among the States having a good compulsory law.

Our outlook for a crop of fall honey is good. W. G. LAWRENCE.

Whiteside Co., Ill., July 13.

Light Honey Crop

The honey crop in this locality is only about half of what it was last year. The weather was too cold, and the clover season is about over. It is possible, but not probable, that we will get a light fall crop.

HENRY A. WYMAN.

Kewaunee Co., Wis., July 17.

White Honey Almost a Failure

I think the bee-keepers of this part of the State at least are suitable subjects for the "blasted hopes" column, as our white honey crop is nearly an entire failure, owing to the almost continuous rains and cloudy weather during the period of clover bloom.

Clover never promised better. There was a very rank, thick growth of it, and between showers it smelled very sweet, and bees worked lively on it, but for only a few hours or a day at a time, when they would be shut in by another rain, and consume a good part, no doubt, of what little they had just gathered. The result is that our supers are from partly-filled to empty. Those run for extracted honey did a little better, but not much.

There was a little basswood bloom, and bees got merely a taste from that. Now we hope our bees will get enough fall honey for winter stores, at least. We have had but little surplus from this source for several years, whereas usually we used to get much more dark than white honey.

In answer to Dr. Miller's request, I will say that several times I have set one colony over another with an excluder between, with good success.

In one of my upper extracting stories with an excluder below, we found an egg in a queen-cell at two different times, and there had been no brood reared from below where the queen was for a week or more. The eggs must have been brought up from below. Is this a common occurrence or very rare?

I have been wanting to get a crop of honey that would warrant me in attending the National Bee-Keepers' Association, and thought when San Antonio was selected as the place for the next meeting, I must attend if possible, and meet face to face some of the veterans and larger honey-producers, most of whom I know only by their writings in the bee-papers. Also to look over some of the great State of Texas, which I hurriedly passed through 22 years ago. B. T. DAVENPORT.

Green Lake Co., Wis., July 22.

CONVENTION NOTICES.

National.—The International Fair is to be held in San Antonio, Tex., Oct. 21 to Nov. 1. When this Fair is in progress there are very low rates in force on the railroads out for 600 or 700 miles. Then there are harvest excursions from the North on the 2d and 4th Tuesdays of the month. The 4th Tuesday in October comes on the 24th. Considering these facts, it has been decided to select Saturday, Oct. 28, as bee-keepers' day at the Fair. This will give ample time for members from the North to reach the city by starting the 24th. The regular sessions of the convention will begin Monday, Oct. 30, *and continue three days.*

The headquarters of the National Association will be at the Bexar Hotel (pronounced Baer, long sound of a), corner of Houston and Jefferson Sts., and rates are only $1.00 a day, and up. The convention will be held at Elks' Hall, 125 W. Commerce St., only two blocks from the Bexar Hotel.

Flint, Mich. W. Z. HUTCHINSON, *Sec.*

Missouri.—The Missouri State Bee Keepers' Association will meet in Sedalia, Aug. 22 and 23, opening session to be at 2:30 p.m., Aug. 22. The room to meet in will be named later on. The State Fair meeting there at the same time will obtain low railroad rates from all parts of the State. The Livestock Association also meeting there on the 24th will give us some inspiration. Hon. Geo. B. Ellis, Secretary of the Agricultural department, will be there and give a talk and lend a helping hand. Louis A. Osborn, of that place, has kindly offered to act as host, and will direct to the place of meeting and to accommodation. Hotel accommodations can be had at $1 to $2 a day. Private boarding cheaper. Let us turn out en masse and have a glorious time as well as to effect some extraordinary progress. W. T. CARY, Sec.

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The **STANDARD-BRED** kind. Untested, 75 cents each; 3 for $2.10; or 6 for $4.00. They give satisfaction. Or the American Bee Journal for a year and a Queen for $1.50. Here are some unsolicited testimonials from those who have had our Queens:

What They Say of Our Queens

GEORGE W. YORK & Co
After importing queens for 15 years, you have sent me the best. She keeps 9½ Langstroth frames fully occupied to date, and although I kept the hive well contracted, to force them to swarm, they have never built a queen-cell, and will put up 100 pounds of honey if the flow lasts this week. CHAS. MITCHELL.
Ontario, Canada, July 22, 1905.

GEORGE W. YORK & Co.
The two queens received of you some time ago are fine. They are good breeders, and the workers are showing up fine. I introduced them among black bees, and the bees are nearly yellow now and are doing good work. A. W. SWAN.
Nemaha Co., Kans., July 15, 1905.

GEORGE W. YORK & Co.
The queen I bought of you has proven a good one, and has given me some of my best colonies. N. P. OGLESBY.
Washington Co., Va., July 22, 1905.

GEORGE W. YORK & Co.
The queen received of you a few days ago came through O. K., and I want to say she is a beauty. I immediately introduced her into a colony which had been queenless for 20 days. She was accepted by them, and has gone to work nicely. I am highly pleased with her and your promptness in filling my order. My father, who is an old bee-keeper, pronounced her very fine. You will hear from me again when I am in need of something in the bee line. E. E. MCCOLM.
Marion Co., Ill., July 13, 1905.

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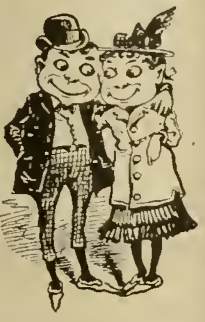

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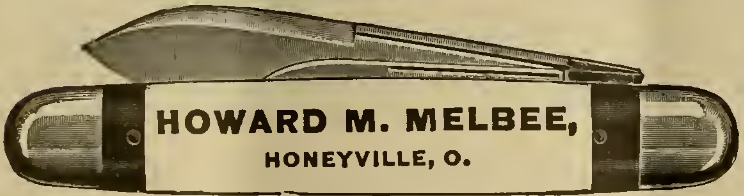
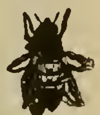
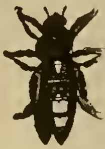
Your Name and Address on one side—Three Bees on the other side.





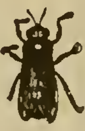


[THIS CUT IS THE FULL SIZE OF THE KNIFE.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.



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How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $2.00.

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500 Colonies of Bees to run on shares in Southwest Texas—that great honey country. Personal attention. **H. H. HYDE**
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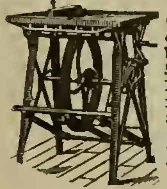

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Safe arrival guaranteed.

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Untested Queens, 75c each; six, $4; dozen, $7.50. Select Untested, $1 each; six, $5; dozen, $9. Safe arrival and satisfaction guaranteed. Descriptive circular free.

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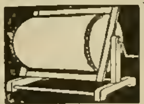

kills all lice and mites. No injury to birds or feathers. Handles any fowl, smallest chick to largest gobbler. Made in three sizes. Pays for itself first season. Also *Lightning Lice Killing Powder*, *Poultry Bits*, *Lice Murder*, *etc.* We secure special low express rates. Catalog sent free. Write for it.

CHARLES SCHILD CO.
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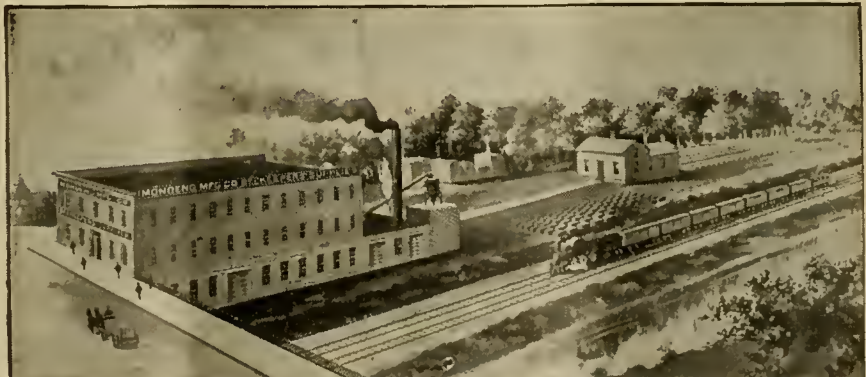

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Dittmer's Foundation is the Best.

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Full line of SUPPLIES, wholesale and retail.

Working Wax into Foundation for Cash a Specialty.
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Wisconsin Basswood Sections

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Is what we are making for our customers.

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We carry a full line of SUPPLIES. Ask for Catalog.

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What Adel Bees Do

E. MILTON, MASS., May 27, 1905.
Send me queen same strain as the one sent 1904. That queen proved the best queen I ever received. Her bees filled a super before May 15, 1905.
ROBT. FORBES.

All Tested Queens are $1 each.

HENRY ALLEY, Wenham, Mass.

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1-frame Nucleus with Queen............$1.50
1 Tested Queen, $1.00; 6 for........... 5.00
1 Warranted Queen, 75c; 6, $3.50; 12 for 6.00
Satisfaction guaranteed. Address,

N. STAININGER, Tipton, Iowa.

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Tennessee Queens

Owing to the great demand for my TENNESSEE QUEENS for several seasons, and the quantity of standing orders from old customers, I decided not to advertise until my books were cleared of orders, and thus avoid disappointing customers.

I am now ready to fill orders by RETURN MAIL. Breeders used: Imported dark leather-colored Italian; my selections from light imported Italian; Moore's long-tongue; golden; Carniolan (mated to Carniolan drones in distant yard, and to Italian drones); imported Caucasian (lately received, mated for the present to Carniolan and Italian drones).

Prices until Oct. 1.		After Oct. 1.		Tested—	
Untested 12 for	$6.00	Untested 12 for	$7.50	Each	$1.50
" 6 for	3.25	" 6 for	4.00	Breeders—	
" 1 for	.60	" 1 for	.75	Each	3 00

27A13t **JOHN M. DAVIS, Spring Hill, Tenn.**

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Capital City Apiary!

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Untested, after June 15, 75c; Tested, $1.00; Breeders—the very best, $5.00. Terms cash with order. Safe arrival and satisfaction guaranteed. **WALTER S. ROSS.**
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Tin 4-in. Smoke Engine 3½-inch 3-inch 2½-inch 2-inch Wonder
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Sent on receipt of price per mail.

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Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine.
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That's how they live and thrive. You can't have healthy, profitable fowls or stock and have lice too.

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promptly kills all insect vermin and makes sitting hens comfortable. Sample 10c; 100 oz., $1.00 by express.

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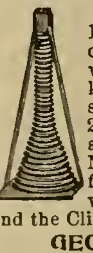
Queen-Clipping Device Free!



The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. It is used by many bee-keepers. Full printed directions sent with each one. We mail it for 25 cents; or will send it FREE as a premium for sending us One New subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

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The **best** magazine for beginners. (It has been published by us regularly for 15 years.)

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Bees, Queens and Nuclei

Choice home-bred and imported stock. All queens reared in full colonies.

One untested queen	$ .65
One tested queen	.90
One select tested queen	1.10
One breeding queen	1.65
One comb nucleus (no queen)	1.00

All grades ready to send by return mail.

Safe arrival guaranteed. For prices on quantities and description of each grade of Queens, send for free price-list. 100 or 200 lbs. of Brood Foundation. Send for sample and prices. **J. L. STRONG.**
204 East Logan Street, CLARINDA, IOWA.
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When consigning, buying or selling, consult
R. A. BURNETT & CO.,
199 SOUTH WATER ST. CHICAGO, ILL.

BLACK BREASTED RED GAMES—"The KING of Poultry." Large size, good layers of finest eggs. Hardy and fearless, the best all purpose fowl. Willow legs and Bay eyes. Illustrated circular. 25th year. H. H. FLICK, MANCHESTER, MD.

Queens From best honey-gathering stock, 60c. Tested Queens, $1.00.
J. F. MICHAEL
28A4t Rt. 1, WINCHESTER, IND.

NEW COMB HONEY-CROP OF 1905
We believe it would pay those having it in car lots or otherwise to write us. Give us your lowest spot cash prices, and fully describe the goods and style of package; when you can ship, etc. We handle more of these goods than any other firm in the U.S. Yours for business,
THOS. C. STANLEY & SON, Bees and Honey
28Atf MANZANOLA, COLO.

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ROOT'S GOODS

At Root's Factory Prices

Queens Now Ready to Supply by Return Mail

Stock which cannot be excelled. Each variety bred in separate apiaries, from selected mothers; have proven their qualities as GREAT HONEY-GATHERERS.

Golden Italians Have no superior, and few equals. Untested, 75c; 6 for $4.00.

Red Clover Queens Which left all records behind in honey-gathering. Untested, 75c; 6 for $4.

Carniolans —They are so highly recommended, being more gentle than all others. Untested, 75c; 6 for $4.00.

C. H. W. WEBER CINCINNATI ...OHIO...
Office and Salesrooms, 2146-48 Central Ave. Warehouses. Freeman and Central Aves.

Honey and Beeswax

CHICAGO, July 18.—Market is at a standstill, partly because of the time of year when little comb honey is consumed and partly to await the outcome of the present harvest. The weather is at present ideal and the flow of nectar makes the bees hum, that hum that puts smiles on the face of the husbandman though he be weary. R. A. BURNETT & CO.

ALBANY, N.Y., July 26.—There is some call for honey, new crop, and if here would probably sell for best prices of season, as the general impression is there will be a large crop. White comb honey will start off at 15c to early buyers.
H. R. WRIGHT.

KANSAS CITY, July 20.—New comb honey has made its appearance; fancy white in 24-section cases selling at $2 75 per case; No.1 at $2.50, and good demand. There is no new extracted in as yet, market on old stock being quotable at from 5@6c. Beeswax, 25@28c. C. C. CLEMONS & CO.

PHILADELPHIA, July 19. — The outlook for honey is very good. Some lots of new white honey have already arrived and are selling in a small way, according to grade, from 12@14c. New extracted honey is selling: Fancy white, 6½@7c; amber, 5½@6½c. Beeswax in good demand at 28c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

CINCINNATI, July 10.—We sold to-day at our store new crop of fancy comb honey at 13½c per pound. There is still a big stock of last season's honey on the market, that is going begging at any price. Extracted honey is moving quite lively now. We sell amber in barrels at 5¼@6½c, according to quality. White clover at 7@8½c. Beeswax, 26c.
THE FRED W. MUTH CO.

DENVER, June 26.—The demand for both comb and extracted honey is light at present, and there is enough of old stock on hand yet to last until the new crop comes in; the same is selling as follows: No. 1 white comb, per case of 24 sections, $2@$2.20; No. 2, $1.75@$2. White extracted, 6½@7½c per pound. Beeswax, 26c.
THE COLO. HONEY-PRODUCERS' ASSN.

NEW YORK, June 19.—The comb honey market is very quiet and we are hardly justified in making quotations. Some few lots are sold here and there at 13c for fancy, and 10@12c for lower grades, but no large blocks could be moved at these figures. There is still considerable of last year's crop unsold, part of which, no doubt, will have to be carried over until the fall. Extracted honey in fairly good demand. New crop California honey selling at 6½@7c for water-white, 6@6½c for white, and 5@5½c for light amber. Southern at 50@60c per gallon according to quality. Beeswax somewhat declining; choice average stock selling at 29c.
HILDRETH & SEGELKEN

CINCINNATI, O., July 17.—There is no demand for comb honey on account of the warm weather. Extracted is in usual demand for this season of the year. We quote white clover at 7@8c: amber, in barrels, at 5¼@5½c; in cans, 5¾@6c. Beeswax, 28c. C. H. W. WEBER.

SAN FRANCISCO, July 19.—White comb, 1-lb. sections, 11@—cents; amber, 8@10c. Extracted, water-white, 5@—cents; white, 4¾@—; light amber, 4@—cents; amber, 3@3½c; dark amber, 2½@—c. Beeswax, good to choice, light, 27@29c; dark, 25@26c.

There is now plenty of new honey of good quality on the market, but it is moving slowly and prices continus weak. Prices for all grades of both extracted and comb honey are ruling lower than last year, and even at the low prices there is a tendency for stock to accumulate.

PURE BASSWOOD
HONEY
IN 60-POUND CANS

We have a good supply of **Pure Basswood Honey** in 60-lb. cans that we can ship by return freight at these prices: 1 can in a box, at 8 cents a pound; 2 or more cans, boxed, at 7½ cents—all f.o.b. Chicago. Cash with order. Sample, by mail, 8 cents in stamps, to cover package and postage.

Address,
YORK HONEY AND BEE SUPPLY CO.
141-143 Ontario St., CHICAGO, ILL.

Do You Need Queens?
By Return Mail?

If so, we can fill your order with the best Queens that money can buy. Try our strain of 3-band Italians; they will not disappoint you with empty supers. Untested Queens, 75 cents; $8 per doz. Tested Queens, $1 each. Send for circular. J. W. K. SHAW & CO.
13Atf LOREAUVILLE, Iberia Par., LA.

"TIME IS HONEY"

SO THEREFORE LOSE NO TIME IN SENDING IN YOUR ORDER FOR

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Established 30 Years

Twenty Big Agencies in the U.S.

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WHERE YOU BUY YOUR
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LEWIS WATERTOWN, WIS. U.S.A.
MAKES THE FINEST

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G. B. LEWIS CO. Bee-Keepers' Supplies **Watertown, Wis.**

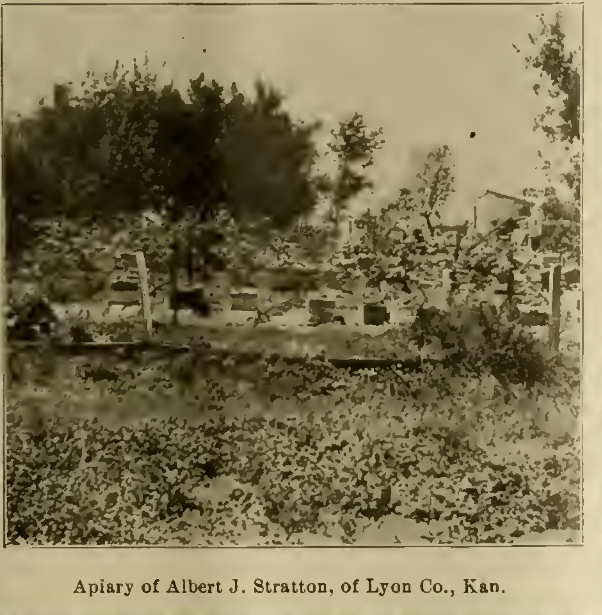
Established in 1861

THE AMERICAN BEE JOURNAL

Oldest Bee-Paper in America

45th Year CHICAGO, ILL., AUGUST 10, 1905 No. 32

Part of Home Apiary of T. P. Robinson, of Williamson Co., Tex. Making examination preparatory to grafting queen-cells. Mrs. Robinson at the right, and Miss Myrtle Adams at the left.



Apiary of Albert J. Stratton, of Lyon Co., Kan.

Apiary of C. C. Richardson, of Hamilton Co., Ohio.

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY

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334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec05" on your label shows that it is paid to the end of December, 1904.

SUBSCRIPTION RECEIPTS.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows that the money has been received and credited.

ADVERTISING RATES will be given upon application.

National Bee-Keepers' Association

Objects of the Association

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00

General Manager and Treasurer—
N. E. FRANCE, Platteville, Wis.

☞ If more convenient, Dues may be sent to the publishers of the American Bee Journal.

The Honey-Producers' League

(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

MEMBERSHIP DUES

1. Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.
2. Any honey-dealer, bee-supply dealer, bee-supply manufacturer, bee-paper publisher, or any other firm or individual, may become a member on the annual payment of a fee of $10, increased by one-fifth of one (1) percent of his or its capital used in the allied interests of bee-keeping.

GEORGE W. YORK, Manager,
334 Dearborn St., CHICAGO, ILL.

Italian Queen-Bee Free as a Premium

To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us ONE NEW subscription with $1.00 for the Bee Journal a year. Now is the time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.

HONEY-JARS.

For a limited time we offer No.25 Honey-Jars, porcelain cover, metal screw cap, holding one pound of honey net, one gross in case complete in 5-gross lots, $4.00 per gross: less quantities, $4.50 per gross, f o.b. New York. If you want to secure some, let us know at once.

HILDRETH & SEGELKEN,
265 & 267 GREENWICH ST., NEW YORK, N. Y.
11Atf Please mention the Bee Journal.

IN THE HEART OF MICHIGAN

Within a hundred miles of me are over 3/4 of the bee-keepers of Michigan. I am on the Pere Marquette R.R., which completely covers this region. Root's Goods, Factory Prices, Prompt Service, Low Freight. Send for Catalog.

GEORGE E. HILTON,
28A12t FREMONT, MICH.
Please mention Bee Journal when writing

"If Goods are wanted Quick, send to Pouder"

BEE-SUPPLIES

Root's Goods at Root's Prices

Everything used by Bee-Keepers.
POUDER'S HONEY-JARS. Prompt Service.
Low Freight Rates. .·. .·. .·. Catalog Free.

Hoosier Strain Italian Queen-Bees by Return Mail

Untested Queen	$ .75	Select Breeding Queen	$5.00
Select Untested Queen	1.00	Best Imported Queen	5.00
Tested Queen	1.00	Fair Imported Queen	3.00
Select Tested Queen	2.00		

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Millions of Sections
Shipping-Cases TONS of COMB FOUNDATION

Abundance of Bee-Smokers, Bee-Veils, Bee-Escapes, Bee-Hives, etc. Everything the bee-keeper needs. The best goods made. **Lewis' Goods in Indianapolis at Factory Prices. Orders received in the morning shipped same day.** FINE ITALIAN QUEENS mailed promptly from our breeder, here in the city. Untested, 75c; Select Untested, $1.00; Tested, $1.00; Select Tested, $2.00.

C. M. SCOTT & CO. 1004 EAST WASH. STREET
INDIANAPOLIS, IND.

N.B.—A Porter Bee-Escape, or its equivalent, FREE with first order, if you say where you saw this ad.

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$50 to $100 per month salary assured our graduates under bond. You don't pay us until you have a position. Largest system of telegraph schools in America. Endorsed by all railway officials. OPERATORS ALWAYS IN DEMAND. Ladies also admitted. Write for Catalog.

MORSE SCHOOL OF TELEGRAPHY,
Cincinnati, O. Buffalo, N.Y. Atlanta, Ga. LaCrosse, Wis. Texarkana, Tex. San Francisco, Calif.
29A17t Please mention the Bee Journal

FOR SALE

100 colonies of **BEES.** Will trade for land in western Kansas.

EDWIN BEVINS, Leon, Iowa
32A2t Please mention the Bee Journal.

If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published, send $1.20 to

Prof. A. J. Cook, Claremont, Cal.,

—FOR HIS—

"Bee=Keeper's Guide."

Liberal Discounts to the Trade.

BLACK BREASTED RED GAMES-"The KING of Poultry." Large size, good layers of finest eggs. Hardy and fearless, the best all purpose fowl. Willow legs and Bay eyes. Illustrated circular. 25th year. **H. H. FLICK, MANCHESTER, MD.**

Lewis' Shipping-Cases Sections, and a full line of Bee-Supplies

BY RETURN FREIGHT OR EXPRESS. Send to

H. M. ARND, Mgr. **YORK HONEY AND BEE SUPPLY CO.** (Not Inc).
141 & 143 Ontario Street, CHICAGO, ILL.
(5 short blocks north of the C. & N. W. Ry. Passenger Station, using the Wells St. Cable Line from center of city to Ontario St.)
Long Distance Telephone—North 1559

Catalog and prices on Honey on application. If you want **Good Goods at Factory Prices and Prompt Shipment,** send your orders, or call on us.

BEESWAX WANTED—28c cash, or 30c when taking Bee-Supplies in exchange —delivered here.

"DADANT'S FOUNDATION"

IT EXCELS.

* * *

WE GUARANTEE SATISFACTION.

* * *

BEE-SUPPLIES

OF ALL KINDS.

* * *

Beeswax Wanted at all Times.

* * *

DADANT & SONS, Hamilton, Ill.

STANDARD BRED QUEENS.

BUCKEYE STRAIN RED CLOVER, GOLDEN ITALIANS

By Return Mail. Safe Arrival Guaranteed.

PRICES.	ONE	SIX	TWELVE
Untested	$0.75	$4.00	$7.50
Select Untested	1.00	5.00	9.00
Tested	1.50	8.00	15.00
Select Tested	2.00	10.00	18.00

Select Breeders, each $3.00
Two-frame Nucleus and Red Clover Queen 3.00

THE FRED W. MUTH CO.,
No. 51 WALNUT ST., CINCINNATI, OHIO.

We Sell Root's Goods in Michigan

Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.

M. H. HUNT & SON,
Bell Branch, Wayne Co., Mich

Please mention Bee Journal when writing.

VIRGINIA QUEENS Italian Queens secured by a cross, and years of careful selection from red-clover queens and superior stock obtained from W. Z. Hutchinson. Untested queens, 75c; after June 15, 60c; tested queens, $1.00; after June 15, 75c; selected tested queens, $1 25; after June 15, $1.00. Write postal card for circular. CHAS. KOEPPEN.

17A26t FREDERICKSBURG, VA.

Bee-Supplies!

We carry a large stock and greatest variety of everything needed in the Apiary, assuring best goods at lowest prices, and prompt shipments. We want every bee-keeper to have our **Free Illustrated Catalog**, and read description of Alternating Hives, Massie Hives, etc. Write at once for Catalog, either English or German language.

KRETCHMER MFG. CO., Red Oak, Iowa.

—AGENCIES—

Trester Supply Co., Lincoln, Neb.
Shugart & Ouren, Council Bluffs, Iowa.
Fulton & Ford, Garden City, Kansas.
I. H. Myers, Lamar, Colo.
Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex.

FINE QUEENS

By Return Mail. From my 3 and 5 banded long-tongued Italians. Tested, $1; warranted tested, 75c; untested, 60c; no disease. I guarantee all Queens perfect, to arrive safely, and to give reasonable satisfaction. I have pleased others and can please you. May I ask for a trial order?

CHAS. M. DARROW
23Atf R. F.D. No. 1. MILO, MO.

QUEENS

We have secured the services of one of the best Queen specialists in the U. S. Over 20 years' experience rearing Queens. Our Yard is stocked with select breeders from the best yards in America, and can send Queens by return mail.

Prices to Sept. 1, 1905:

Untested Queens	$ .75
Select Untested Queens	1.00
Tested Queens	1.50
Select Tested Queens	2.50

GRIGGS BROS,
521 Monroe Street,
TOLEDO, - OHIO.

Please mention Bee Journal when writing.

QUEENS

August is the time to requeen the apiary. It pays to have the best possible stock. Root's Red Clover Strain is famous the world over for its many points of excellence. A young, vigorous queen introduced now will bring the colony up to the best possible condition for wintering. Queens, too, now are the cheapest, and prompt delivery is made.

We are in an unequalled position to fill your queen orders. Having eleven apiaries, approximately 900 hives, with hundreds of Baby Nuclei, we are in condition to take care of all orders sent.

Table of Prices

Regular Italian Queens

Untested queens	$ 75
Select untested queens	1 00
Tested queens	1 50
Select tested queens	2 50

Red-Clover and Other Strains of Italian Queens Reared in the Root Co's Apiaries

Untested queen	$1 00
Select untested queen	1 25
Tested queen	2 00
Select tested queen	3 00
Breeding queen	5 00
Select breeding queens	7 50
Extra select breeding queens, 1 year old	10 00

Imported Queens

Fair imported queens	$3 00
Best imported queens	5 00

Caucasian Queens

We can spare a limited number of imported Caucasian queens, received direct from the best breeders in Caucasus. Prices as follows:

Extra select Caucasian imported queens	$15 00
Select Caucasian imported queen	10 00
Extra select untested Caucasian-Italian queens, from Caucasian mothers mated with Italian drones	3 00
Select do	2 00

Orders filled in rotation. Delivery begins about July 15.

Prices of Nuclei

One-frame nucleus, without queen	$2 00
Two-frame nucleus, without queen	3 00
Three-frame nucleus, without queen	3 50
One colony of bees in 8-frame Dovetailed hive, no queen	7 50

"I received my bees and queen and I am well pleased with them. The queen is a beauty, and the bees easy to handle. They were to work in ten minutes after I put them in the hive."—E. T. Mills, Ills., May 15, 1905.

"I beg to acknowledge receipt of five fine queens, and, as they got here in good shape, beg to thank you for prompt and successful delivery. Without further advice, I am yours truly,
"Frederico Somerford, Cuba, June 13, 1905."

"I am pleased to say that the bees are doing fine. I find eggs in every available cell. I also found the queen, and it is entirely satisfactory."—W. H. Durst, Ohio, July 20, 1905.

Send for complete price-list

CASES

Don't allow your comb honey to be sold at low prices on account of poor **Shipping-Cases.** Put your crop into **Root's No-Drip Cases,** and it will reach the market in perfect condition and bring the highest prices. Our cases are made of selected basswood, with 2 or 3 inch glass front, which shows off the honey to the best possible advantage. Below is a condensed price-list. Complete prices and particulars are found in our General Catalog. Write for it.

Shipping-Cases. Name and Size of Case.	Nailed each.	Price complete including 3-in. glass one side, nails and paper, in flat.			With 2 in glass instead of 3—per 100.	Without the glass, per 100.
		1	10	100		
12-in. 4-row for 4¼ section	30	25	2 00	$18 00	$17 00	$16 00
10-in. 4-row " "	30	25	2 00	17 00	16 00	15 00
12-in. 2-row " "	20	15	1 30	11 00	10 50	10 00
10-in. 2-row " "	20	15	1 20	10 50	10 00	9 50
16-in. 2-row " "	25	18	1 50	12 00	11 50	11 00
8-in. 3-row " "	20	15	1 30	11 50	10 75	10 00
6¼-in. 3-row " "	20	15	1 20	11 00	10 25	9 50
7⅛-in. 4-row for 4x5 "	30	22	1 80	16 00		14 00
7⅛-in. 3-row " "	25	20	1 40	12 00		10 50
9¼-in. 4-row for 3⅝x5 "	30	22	1 80	16 00		14 00
6¼-in. 3-row " "	25	20	1 40	11 50		10 00

5-Gallon Square Cans

These are the favorite packages for shipping Extracted Honey to the market. There can be no shrinkage and consequent leaking; no taint to the honey from wood, as is so frequently the case with kegs and barrels. The cans being square economize space, and are easily handled. This package is almost exclusively used in the West. They take 4th class freight-rate.

PRICE LIST OF SQUARE CANS.

No. in a box.	Capacity of each can in gallons,	in honey.	Price of 1 box.	10 bxs.	Wt. of 1 box.
1	5-gal. can boxed	60 lbs.	$ 55	$ 5 00	10 lbs.
2	5-gal. "	60 "	85	8 00	15 "
10	1-gsl "	12 "	1 50	14 00	20 "
12	½-gal. "	6 "	1 50	14 00	20 "
24	¼-gal. "	3 "	2 40	23 00	25 "
100	1-gal. "	12 "	11 00	105 00	110 "
100	½-gal. "	6 "	9 00	85 00	80 "
100	¼-gal. "	3 "	7 00	65 00	60 "

"The consignment of bee-material received to-day. Your promptness in filling orders is remarkable, especially when the circumstances are considered. I am very well satisfied with the goods and your dealing. I take pleasure in having introduced Root's Goods into this neighborhood."—Rev. Wm. Engelke, Iowa, May 5, 1905.

"I do not want anything set up, as I would rather set the hives up myself, besides it is a pleasure to put Root's hives and fixtures together."—John L. Funk, Ohio, Jan. 11, 1905.

"I desire to thank you for being so prompt in sending the sections I ordered from you. They came in less time than it takes to tell it."—L. G. Reed, Ohio, July 10, 1905.

Send for complete price-list

The A. I. Root Company

MEDINA, OHIO

BRANCHES

Chicago, 144 E. Erie St. Philadelphia, 10 Vine St. New York, 44 Vesey St.

AMERICAN BEE JOURNAL

(Entered at the Post-Office at Chicago as Second-Class Mail-Matter)

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GEORGE W. YORK, Editor CHICAGO, ILL., AUGUST 10, 1905 Vol. XLV—No. 32

Editorial Notes and Comments

A "Post" that Needs Posting

In the Denver Post the first week in July there appeared the following questions:

1. Is there such a thing as manufactured honey? If so, is it comb or extracted, and where can it be obtained?
2. Can eggs be manufactured?

The Post gave the following answers:

1. Yes. It is, both the comb and the extracted, and can be obtained from almost any grocer. A great percentage of the honey marketed now is of this class.
2. They can be and are.

Mr. R. R. Patterson, of Otero Co., Colo., sent us the newspaper clipping from the Denver Post, showing the above questions and answers.

As Manager of The Honey-Producers' League we wrote the editor of the Post, calling his attention to the honey misrepresentation, and requesting a correction, adding that we would be pleased to enroll the Denver Post in the list of newspapers that were helping to undo the wrong perpetrated on an honest industry by the starting of the manufactured-comb-honey libel some 25 years ago.

We have not had any reply to our letter to the Post's editor. If any Colorado bee-keepers have seen a correction of the quoted misrepresentations in the Post, we would be pleased to know it. Perhaps some Denver bee-keeper can enlighten us.

By the way, the poultry people ought to look after their "manufactured eggs" question and answer. We quoted it just to show what a lot of valuable information (?) the Post was giving its readers!

◆

Future of One-Piece Sections

Editor Root and Dr. Miller are at it again. This time it's a scrap as to the outcome of the growing scarcity of basswood lumber. Editor Root entertains the idea that as a result of that scarcity producers of section-honey will soon be driven to make a change to bulk honey or something else. The Doctor obstinately refuses to yield to such pessimistic views, and insists that he is not going to give up the production of section-honey, no matter how far skyward the price of basswood may soar. The following "stray straw" gives the situation at latest accounts from the seat of war:

> "At last we have the whole dread truth. After basswood lumber disappears it will cost 75 cents a thousand extra for 4-piece sections, page 701. Pshaw! if that's all, I'm not going to lie awake nights fearing that I'll have to give up the production of section honey."

To which Editor Root makes this comment:

> "But, hold on, Doctor! When lumber advances labor will also advance somewhat. It is the experience of the Root Co. that our own labor has increased, and is still increasing in cost. Well, suppose we put the price $1.00 per 1000 extra, you will have to add to that cost your own labor in putting the 4-piece sections together."

Clearly, Editor Root thinks 4-piece sections do not count. It's either 1-piece or no section honey. On the other hand, Dr. Miller will take "aid and comfort" from the fact that there are bee-keepers who used 4-piece sections before the 1-piece were known, and have never been willing to give up the 4-piece for the 1-piece. C. E. Woodward says in the last Bee-Keepers' Review:

> "I have never yet seen a 1-piece section that I considered worth putting the foundation into. The 4-piece section, made from white poplar, is the only first-class section on the market."

◆

Injury to Queens in the Mails

Most of the queens sent by mail, fortunately, are untested queens that have only been laying a short time. These generally, not always, may be expected to do as good work as if they had taken no postal journey. On the other hand, there is much complaint that tested queens turn out poorly under the same circumstances, the purchaser sometimes feeling that he has not been fairly dealt with to have a queen prove a poor layer after having paid an extra price. The following paragraph from the Bee-Keepers' Review emphasizes the matter. Recounting a visit to J. P. Moore, the Kentucky queen-breeder, the editor says:

> "Among the things mentioned by Mr. Moore, one worth repeating is the injury that comes to tested queens from shipping them, or, to be more exact. perhaps, from checking their egg-laying so suddenly by taking them from full colonies when they are at the height of their egg-laying. He says that a young queen, that has just commenced to lay, stands shipment much better, and usually proves to be of value as an egg-layer after shipment, while a tested queen often turns out very poorly. He says that a tested queen ought to be shipped in a full colony or a nucleus, to say the least. I have noticed the same thing myself. This year I have bought several tested queens of various breeders, and very few of them have turned out well. One layed worker-eggs for awhile, and then turned drone-layer. Another layed a little while, and then turned up missing. None of them have proved good, prolific layers. Young queens, of this year's rearing, sent as soon as they had commenced laying, turned out all right. Still further, I bought nearly a dozen full colonies having tested queens at least one year old, and some are probably older, and these queens, never having been out of their hives, are splendid layers. As Mr. Moore says, a choice tested queen ought to be shipped in a full colony or a nucleus."

It is no new suggestion that a sufficient reason for the different results in mailing tested and untested queens lies in the fact that a tested queen taken right in the midst of heavy laying carries a burden of eggs nearly equal to the weight of her own body, while an untested queen carries a lighter weight. Let a man with a bag on his shoulder, nearly equaling his own weight, attempt to stand in the middle of a moving, swaying railroad car, and he may judge something of the difficulty to be met by the heavily laden queen. If sent in a nucleus or a full colony, she has a more secure footing upon her native heath.

It is a question, however, whether, with the proper precautions, the tested queen may not be sent just as safely by mail as any other. If she be taken from the hive and kept in a cage for 24 hours or more before being shipped, her burden of eggs will be greatly reduced in weight. Surely she ought to travel more safely for the lightening. Most likely any queen would be a little better off to go in a nucleus or full colony, but in cases of long distance express charges are high, perhaps amounting to more than the damage accruing to the queen when sent by mail. Safe advice to the beginner would be to say:

When buying a tested queen, either have her sent in a full colony or nucleus, or else stipulate that she be kept out of the hive a day or more before being mailed.

◆

Size of Cells

It may be convenient to remember the figures 3, 4, and 5 as applying to the size of cells, that is, their diameters. The diameter of a queen-cell at the time when the egg is placed in it is such that 3 of them placed side by side measure an inch; 4 drone-cells measure an inch, and 5 worker-cells.

A Queen Experience

We sent a very fine yellow, selected untested Italian queen to a bee-keeper in Woodbury Co., Iowa, on June 21, as a premium. Tuesday, the 25th, we received the following letter from him, dated June 24, and also the queen still alive:

George W. York & Co.
Dear Sirs:—The Italian queen you sent me arrived Saturday eve, but the wire was mashed in, and in bad shape, and the bees feeble, so I return you the queen by to-day's mail. You can send me another one; but I want a good one, and yellow one.
Yours truly, — — ——.

We at once wrote him that he should have introduced the queen, and not have returned her, as she doubtless would have turned out all right. The wire on the cage was bent in just a little, but that was nothing worth mentioning. If the *bees* accompanying the queen seemed to be a little weak, that was no detriment, as some bee-keepers destroy the bees and cage that come with a queen, and introduce the queen in another cage. This is done to prevent the possibility of also introducing a contagious bee-disease.

No queen-buyer is ever justified in returning a queen that is received *alive*, as queen-dealers only guarantee *safe delivery*, and then *satisfaction*, provided the purchaser does his part. Had the Iowa bee-keeper done his best to use the fine queen we sent him, and she had died in a day or two, or had not given promise of being all right, we would gladly have sent him another queen *free*. But to return a queen that arrived safely, just because the cage-wire was bent in a little, and the accompanying bees seemed to be weak (all as a result of going through the mails), is not the way to treat a queen-dealer or breeder. We have had sufficient experience in the queen-selling business to know that many of the complaints against queen dealers are wholly unwarranted. Of course, some complaints are entirely justifiable. But we know of a number of queen-dealers who would much rather *give* a customer a half dozen queens than not to treat him fairly. Queen-dealers have rights as well as do those who buy queens, and when both parties to a deal will act fairly there will be no occasion for complaints.

Miscellaneous News Items

Baron H. De Blonay, a noted Swiss bee-keeper who was also a civil engineer, died June 9. He was the owner of the castle of which Mr. C. P. Dadant gave a description in the American Bee Journal on his return from Europe. De Blonay was a very democratic man, and did not boast of his ancestry, which dated back nearly 10 centuries. He always signed his name "H. De Blonay, Eng." He was quite a lover of the bees, and a member of the Societe Romande d'Apiculture.

◆

California Apiarian Experiment Station.—We take the following item from the Kingsburg (Calif.) Recorder:

> The United States Department of Agriculture has established a sub-station in the plant-introduction garden at Chico, for investigations in apiculture. An apiary has been established, and a specialty will be made of the testing of honey-plants to be secured by Frank Benton, of the Department, who is now in India. Bee-diseases on the Pacific Coast will be investigated, and experiments will be made with the different varieties of bees, among them the giant bees of India, and the various specimens of the Philippines. The apiary and sub-station at Chico is in charge of John M. Rankin.

◆

Buy Your Own Paper.—B. F. Schmidt, of Clayton Co., Iowa, sends us the following, and suggests that it might interest our readers. But we feel quite sure that very few, if any, of the readers of the American Bee Journal borrow it from their neighbors:

> A man who was too economical to subscribe for his home paper, sent his little boy to borrow the copy taken by his neighbor. In his haste the boy ran over a $4.00 colony of bees, and in 10 minutes looked like a warty summer squash. His cries reached his father, who ran to his assistance, and failing to notice a barbed-wire fence, ran into it, breaking it down, cutting a handful of flesh from his anatomy, and ruining a $5.00 pair of pants. The cow took advantage of the gap in the fence, and got into the cornfield and killed herself eating green corn. Hearing the racket the wife ran and upset a 4-gallon churn of rich cream into a basket of kittens, drowning the whole flock. In her hurry she dropped a $25 set of false teeth. The baby, left alone, crawled through the spilled cream and into the parlor, ruining a $20 carpet. During the excitement the oldest daughter ran away with the hired man, the dog broke up 11 sitting hens, and the calves got out and chewed the tails off of 4 fine shirts.—Corfu "Enterprise."

◆

J. H. Fitch, of Taylor Co., Iowa, made this office a pleasant call last week. He is 72 years of age, and still takes a deep interest in bees.

◆

Wm. Duncan, of Dupage Co., Ill., dropped in to see us last week. He is a banker, and says he has lots of fun with his bees, as well as considerable profit from their honey.

◆

The Michigan Bee-Keepers' Association is advertising the honey crop of its members through the medium of a booklet. This booklet has a crop report, which gives the name and address of each member having honey for sale, how much he has (comb and extracted), and how put up. The booklet also contains information regarding honey as a food, care of honey, etc. They are to be distributed among the honey consumers, and large honey-buyers of the State and elsewhere. If funds will permit, other advertising will also be done outside of the booklet. The plan has been tried one year, and was successful enough to warrant a second attempt this season. The Association extends a hearty invitation to Michigan bee-keepers to join the Association, and also asks them to send their names and reports of their honey crop, and the way it is put up, before Aug. 12, with $1.00, and they will then get the benefit of this year's advertising. The $1.00 will also make each a member of the National Bee-Keepers' Association with its benefits. Every Michigan bee-keeper should *at once* send his (or her) name and address with $1.00 to the acting secretary, Elmore M. Hunt, Bell Branch, Mich.

"Combed" and "Extracted"

HONEY IN ANCIENT IRELAND.

There was no sugar, and honey was greatly valued; bee-hives were kept everywhere; and the management of bees was considered such an important industry that a special section of the Brehon Laws is devoted to it. The people used honey in a great many different ways. They basted roasted meat with it; it was used with salmon while cooking, and as a seasoning with all sorts of dishes. Often at meals each person had a little dish sometimes of silver, filled with honey, beside his plate and each morsel, whether meat, fish, or bread, was dipped into it before being conveyed to the mouth. The people often mixed honey with milk, either sweet or sour, for drinking. From honey also was made a kind of liquor called mead, very sweet and slightly intoxicating. This was considered a delicacy; and a visitor was often treated to a drink of mead immediately on arrival. As bees were so abundant, beeswax, as might be expected, was turned to account for lighting purposes. In some of our old records we find wax candles mentioned as being used in the houses of the richer classes (in Dinnree for instance) long before the fifth century.—From Joyce's Child's History of Ireland, in the Irish Bee-Journal.

ACREAGE OF ALFALFA NECESSARY FOR 50 COLONIES.

How many acres of honey-plant are necessary to take care of 100 colonies of bees?"

This being an alfalfa district, I thought it would perhaps interest my fellow bee-keepers to state my experience this summer, as the above question has often put me to thinking regarding pasturage.

In partnership with my brother we had 79 colonies, spring count. The season was at least three or four weeks late, having cold nights accompanied with drizzling rains at intervals throughout May until the middle of June. By this time the alfalfa was starting to bloom, "scattering." There were very few stores in the hives, no brood-rearing to speak of, as we have no blossoms to mention until alfalfa comes on. On the 26th of June we had two swarms come out which we had to feed for a few days on account of a cold rain. After then we had fine weather, and the bees went to work with a will on the thousands of acres of alfalfa surrounding us, which had a purple cast by this time. By the middle of July all the alfalfa was cut except a little around ditches, etc., our own fields included, and everything seemed to be at a standstill in the apiary. Up to this time we had hived 48 swarms, making a total of 128 colonies. There being very little sweet clover in bloom we decided that the only surplus honey we should get would be gathered on our own farm; and having 30 acres or more of alfalfa, we knew we could control that amount of pasture, as other fields are generally cut when coming in bloom, making better hay. When the first cutting of alfalfa was all done we had only 19 colonies working in the supers. On the 5th of August we were putting on another round of supers, honey coming in galore. That 30-acre field was a sight to behold. From morning till night it was a constant uproar. We stood there many times and listened to the buzz overhead as they passed to and fro, it doing us more good to know that they had at last struck a land of plenty, and we the satisfaction of knowing that we can control to a certain extent our own pasture. That alone amounts to us to more than the loss in hay.

Though only a novice of a few years' experience in bee-keeping, my idea of success in that line, "to be master of the situation," is to control as much as possible our own pasture, and not depend on our neighbors being delayed in cutting their fields of bloom. We are not so fortunate as some bee-keepers where nature provides with plenty of moisture and a constant honey-flow throughout the season. A scarcity of water for irrigation means a scant honey crop; therefore, profiting by this year's experience with alfalfa we will try next year to regulate the bloom so as to have a paradise for the bees throughout the season.

I am satisfied that 1,000 acres of honey-plant isn't necessary to take care of 100 colonies of bees. We had 50 colonies that stored from three to six supers of honey, while the others fell below three supers.—Geo. J. Smith, of Colorado, in Gleanings in Bee-Culture.

Contributed Special Articles

Not More Colonies, But More from Each

BY GRANT STANLEY

THE question uppermost in the mind of many a bee-keeper is likely to be, How many colonies can I handle and make each colony turn out a good profit to the owner? There is scarcely any doubt, however, but that many bee-keepers are keeping more colonies than they can successfully handle, laboring under the impression that it is hives of bees rather than bees in a hive that is to bring ultimate success.

This article has no reference to the specialist or to the experienced bee-keeper who counts his colonies by the hundred, but rather to the majority of bee-keepers as we find them the country over.

Let us look at the farmer for instance. We know very well that there is scarcely a farmer that is large enough for his farm—he has so much land that he is "land poor," so to speak; and if every farmer would put the manure and labor on 50 acres he now puts on 100 he would produce as much, while the reduction in taxes would be no small concern. If I mistake not, there are few farmers in Holland with more than 40 acres of land, and yet the best butter and cheese in the world is produced there. We can see from this that it is not so much in numbers as it is in making each number turn out the highest possible percentage of profit.

I am afraid too many bee-keepers are trying to over-reach in the increase of colonies instead of working to obtain the maximum result from the minimum number. It is not so much the number of colonies as it is in making each colony do its utmost in storing surplus. Any colony that does not store a high percentage after careful manipulation should be broken up, or change the queen. It surely does not pay to furnish hives, fixtures, and possibly labor, to run an apiary of 75 colonies when 50 can be made to secure the same profit. The "not how much but how well" principle will apply fully as well to bee-keeping as to any other line of business.

The queen may be from the most prolific strain in the world, and the hive simply a *ne plus ultra*, and yet without the constant attention on the part of the bee-keeper the highest results will not be reached. It must be the harmonious working of both bees and bee-keeper all along the line in order to bring all this about.

At present we hear a great deal about keeping more bees. If it refers to more bees in a hive, all right; but if it means more hives of bees, my views are somewhat different, and they are in tune with the highest principle of science—to obtain the best possible results from a minimum investment of capital.

Bee-keepers, above all others, have no time to sit at the corner grocery or post-office. If a few moments of leisure time manifest themselves he has perplexing questions which have so presented themselves that he needs to sit down and think them out. Remember, no business will run itself, and if we do not get behind it and shove it along it will not go. The more effort is put into any business the greater will be the success.

Lycoming Co., Pa.

The Sense of Smell Among Bees—Some Experiments

Translated from "The Bulletin de la Societe Romande D'Apiculture"

BY C. P. DADANT

IN July, 1902, while sojourning a few weeks in the Cevennes, I was perusing some old journals found in the sitting-room of an inn, while I was seeking to kill time in a long, rainy day, and the following lines fell under my eyes. I found them in the "France Agricole and Horticole" for April, 1900, and the title was, "Ants Recognize One Another by the Smell."

"The ants," said this article, "recognize one another very readily. When an ant enters a colony which is not its own, it is almost immediately put to death. A German naturalist, Mr. Albrecht Bethe, of Strasburg, has sought to recognize by which sense could be exercised so subtle a recognition, and has ascertained that it was a question of smell. Mr. Cook had already observed that if an ant touched water, it was infallibly attacked by its sisters at its return home, and he had concluded that the washing causes the ants to lose a special property enabling them to be recognized by one another. Then Mr. Forel ('The Ants of Switzerland,' page 263 and following) had confirmed this hypothesis, by showing that ants from different nests may be put together if previously their antennæ, which are the olfactory organs, have been cut off.

"Adding to these considerations a new proof, Mr. Bethe crushed a few ants, and with the juice thus obtained he painted an ant which he then introduced into an ant's nest. When the ant was perfumed with juice of ants from this same nest, it was well received; in the contrary case it was at once attacked.

"A larva, washed in alcohol at 35 degrees, then put back in its nest, was similarly attacked as a stranger. Put aside 24 hours before being returned to the nest it was on the contrary well received, that lapse of time having been sufficient to allow it to reproduce its family smell. It seems, therefore, most likely that in the phenomenon of recognition it is the sense of smell which is in action."

These lines have impressed others besides myself, for I have found them reproduced in L'Apiculteur, of June, 1900, as well as in divers other agricultural or apicultural publications.

The thought has come to me, while reading them, that that which applies to ants is applicable to bees whose customs and instincts differ but little from those of the former. I therefore resolved to repeat with bees the experiments of Mr. Bethe as soon as I would return home. But time failed me, and the entire year passed before I could make the projected experiments.

Last year, in April, as I was classifying some notes, the above quoted lines came back to daylight and reminded me of my projects. I happened to have a few days of quietude, the season was propitious, and I decided at once to make a few trials.

All the experiments made upon ants by Messrs. Bethe and Forel, with the exception of that on cutting the antennæ, repeated by myself upon bees, ended in the same results: they no longer recognized their sister taken away half a minute before, when she had been washed in diluted alcohol. They accepted without difficulty the drones and the workers of another hive than their own when they had been previously painted with juice from crushed drones from their own hive. A few larvæ daubed with diluted alcohol were found thrown out a few minutes later. Returned the next day with their sisters, those bees that had been washed with diluted alcohol and had been held long enough away from the hive to permit this odor to evaporate, were again well received in their home.

In the presence of these facts of which several experiments giving constantly identical results evidenced the value, I was led to enquire whether bee-keepers could not take advantage of this to open their hives and handle their bees, by giving to their hands the odor of the hive which they want to examine. I conducted my experiments in this direction, and will give you further the obtained results which I copy almost literally from what I pompously call "My Apiary Journal."

L. FORESTIER.

[To be continued.]

Retailing Honey—Glucose, Etc.

BY F. STROHSCHEIN

CONSIDERABLE has been said and written about educating retailers to care for honey properly, and there is some ground for it, too, as I shall presently show.

Some time after the early honey harvest two summers ago I entered a small country store, and at once spied a case of comb honey upon the counter. This, of course, interested me, so while the merchant was doing up the articles which I had ordered, I tried to raise the cover of the case. This was not an easy thing to do, for it was covered with other things, among which was a cigar-box full of tobacco. When I did raise the cover enough to get a peep inside I saw quite a good deal of tobacco among the sections. I saw that case for weeks with only a few of the sections removed, and it was no great wonder that the honey did not sell, for if consumers purchase honey with a tobacco flavor they haven't much desire for more. If they did not see the tobacco they possibly had an idea that the bees had gathered the honey from tobacco-plants.

I also saw in a store in a small city a case of honey which reminded me of a rugged, rolling country. It seemed to be up hill and down hill. The comb-surface was so uneven that it was very clear that the bee-keeper had used neither comb foundation starters nor separators. This honey retailed at 14 cents a pound, whether the price was higher or lower in the general market.

EATING GLUCOSE.

I have had some experience with glucose (Karo Corn Syrup). I have a delicate stomach, and certain articles of food produce a bad, slimy taste in my mouth the next morning after eating them. Glucose is among these articles, and up to the time of reading what Prof. Eaton has to say (page 710—1904) I supposed it was the acid, about which so much has been written, that produced these results. Now comes Prof. Eaton and upsets it all, saying that it is perfectly wholesome and contains no acid that is harmful. I have always supposed that pure glucose would be as easy to digest as honey. Yet if the commercial article *is* pure there is quite a difference, for honey has a beneficial influence on my stomach, while glucose produces opposite results.

HOFFMAN FRAMES WITH SQUARE EDGED END-BARS.

Several bee-keepers have expressed a preference for the Hoffman frames with a square instead of a V-shaped end-bar, and I must say that I agree with them, and the bees, too, for they will fill with propolis in the open space on each side caused by the V-shaped end-bar, making it square. In this way 10 times as much propolis holds the frames together as is possible with a square edge, and in separating these frames, and again in pushing them together, propolis gets between the edges and the spacing is increased to a certain extent, for frames need not be handled much, and they can not be gotten into a 10-frame hive unless the propolis is scraped off.

FASTENING FOUNDATION IN BROOD-FRAMES.

The method of fastening foundation with saw-kerf and wedge works beautifully with Dr. Miller, and yet after having tried both ways I find I can fasten starters or full sheets much quicker and more securely with melted wax. I say "more securely," for sometimes the saw-kerfs are not deep enough (or the wedges are too deep), when the wedges can not be driven in far enough, which leaves the foundation too loose, giving a lot of trouble by falling down.

My method is as follows: I get a piece of board ¼ inch thick, 3 inches wide, and long enough to fit between the end-bars. One inch from one edge nail a strip one inch wide, and in thickness half of the top-bar less half of the thickness of the foundation. Hold this against the top-bar so that the strip will reach half across the underside of the top-bar, lay the starter against it, and fasten with melted wax. Thus fastened the starters will not fall down.

VALUE OF PROPOLIS AS A REMEDY.

L'Apiculteur advises bee-keepers to burn propolis on a stove to fill the room with a pleasant odor. I have often done this. But I know of a better use for propolis. For a swollen face, toothache, or other ailment, drop some propolis on a shovelful of hot coals, allowing the fumes to pass over the face, and its curative powers will soon be noticed. In Germany it was even used in this way to cure caked udders of cows.

The products of the hive are used far more as remedial agents in Germany than in the States. Little seems to be known as to where bees get their supply of propolis. In this locality they get their main supply from a sort of poplar-tree, or at least that is what I think it to be. The buds and short stems are full of this sticky glue, and propolis freshly gathered by the bees has the same odor as the glue on these trees, but after it has been for some time in the hive there is some difference in the odor.

IS CEDAR-WOOD MOTH-PROOF?

The honey-bees love the red-cedar trees because they know they are moth-proof. If one can afford to make cedar hives for his bees he will never be troubled with moths. So said Mr. C. S. Key before the Minnesota Horticulturists, when lecturing on the red cedar. I wonder if moths really will avoid cedar-wood. I do not think much would be gained by making hives of cedar-lumber, yet it might be of value for keeping brood and extracting combs secure from the moths. If any bee-keeper knows more about it I wish we might hear of it. I have also seen it stated that lice will not infest poultry if they roost on poles of cedar-wood.

WHY DO BEES IGNORE SOME FLOWERS AT TIMES?

Mr. D. W. Working (page 98—1904) tells of the prolificness of the Rocky Mountain bee-plant—Cleome integrifolia. One spring I got a package of its near relative, Cleome pungens, but none of the seed came up. Having some seed left it was again sown the next spring with the same results. To my surprise a single plant grew there last summer. It began to blossom the latter part of June and continued into September, and such a mass of bloom I never saw before. The discouraging part of it was that I never saw a honey-bee upon the blossoms, although a dozen or more bumble-bees were constantly swarming over it. I have also noticed this condition of affairs with golden-rod. Can any one give a reason why honey-bees will at certain times ignore the flowers of some plants though they are visited by bumble-bees, wasps, and other insects?

Winnebago Co., Wis.

Convention Proceedings

Report of the Chicago-Northwestern Bee-Keepers' Convention, held at Chicago, Ill., Nov. 30 and Dec. 1, 1904

(Continued from page 552.)

QUEENS KILLED WHEN INTRODUCING.

"I introduced a queen into a queenless colony and they killed her; four days afterwards I introduced another queen and they killed her. What should I have done?"

Mr. Wheeler—I would say, put healthy young bees into the hive to kill any drone-layers. They would prepare the way for the queen every time.

Mr. Swift—I had the crossest lot of bees I ever ran across in my life; I couldn't get the queen into that hive; I tried three different queens. I gave it up. I kept them supplied with young bees all the time.

Mr. Snell—The best way is to introduce two frames of young bees into the parent colony, and at the same time put their queen in with them, or introduce a queen at that time. Those bees seem to destroy the laying worker so that the queen is never molested. I have never yet had a failure in that way.

DETECTING ADULTERATION IN BEESWAX.

"How can we detect foreign substance in beeswax?"

Mr. Dittmer—I don't know that I can give any rule. It is force of habit with me. I get wax sometimes, and it looks suspicious, and there is generally something the matter with it. The most common thing that occurs with me is receiving wax that contains tallow. In fact, some people have shipped wax to me and were rather rash about it, so that I think almost anybody could have detected it; but as to giving any chemical process, I can't say anything about it.

Mr. Abbott—I see Dr. Wiley has written another letter to explain the matter with regard to what is called the "Wiley lie," published in the Rural New Yorker. I was writing an editorial note on it before I left, for the Modern Farmer, and I used a sentence at the last of it that these comb-foundation people will be interested in, and these bee-keepers. Dr. Wiley says that paraffin is used wholly or in part in comb-foundation in the United States. This statement came from Canada a short time ago, and now it is repeated by the chief chemist of the United States, and I say in my editorial there are only a few manufacturers of comb foundation in the United States. If they put paraffin in wax they know it, and we want to know it. If they don't do it, it will not be a very hard thing for them to prove it. If they do do it, it will be a very easy thing for the United States chemists to prove. Now this subject of foundation is up, I think it would be a good time to hear from the comb-foundation makers right now as to what they have to say in answer to Dr. Wiley. I have had my say in the paper, and it will appear in the next issue, and I want to know if they put paraffin in foundation.

Mr. Dadant—I will give you three methods by which you can all detect, without chemical analysis, whether comb foundation is pure or not, and you can test it with your own beeswax, comparatively. The first test we have is the HEAT TEST. It is the most delicate because you have to get the exact heat at the exact spot. Foundation is a little more brittle, a little more in pieces than solid beeswax. Therefore you will heat the foundation more readily than beeswax. A lump of beeswax that is round or large will not heat so readily through as sheet foundation full of holes. Therefore you must expect your foundation to melt a little more readily. Between 135 and 150 is the temperature, but your thermometers may vary a little. You take a piece of beeswax, tie it to the thermometer, take it to the right spot, put it in a pint bottle, put the stopper in it, put it on the stove, and see at what degree that thin beeswax melts. Do the same with the sheet foundation, and see whether it melts at the same or about the same temperature. Another test is the SAPONIFICATION TEST. That is the changing of beeswax into soap; it will change to soap as grease will. It is no longer beeswax. Take lye and heat it, and take beeswax and melt it, and pour the two together and it will no longer be beeswax; if it is paraffin it will be paraffin. The paraffin will pour out just the same as before. The paraffin is a mineral substance which is not at all touched by lye, while beeswax is absolutely dissolved by lye.

The third test is SPECIFIC GRAVITY. Beeswax is heavier or lighter than other substances of the same kind. That is another very fine test, because if there is a little bulb of air in your specimen, whether beeswax or foundation, you will change the specific gravity. It is very difficult to make that test, but you can. A specimen that has a great deal of paraffin of one kind will flow where beeswax would go with the foundation. The way to do is this: Take water and put pure beeswax into it. Pour in alcohol until the beeswax goes to the bottom. The beeswax is then heavier than the solution which you have of water and alcohol. Then you are ready to test any samples that may come to you. In this particular it is the same thing as before. If your foundation is full of holes, when you put it under, the air will be in those and hold it up. You have to be very particular to have the wax from your foundation the same as your beeswax, if you want to make a proper test. If you have a sample of paraffin it will float, while the beeswax will go to the bottom.

Mr. Dittmer—It seems to me that the statement that Mr. Abbott has made, as to what Prof. Wiley said, puts the comb-foundation manufacturers in the position of being guilty unless they are proved innocent. It seems to me that is rather a poor predicament to find one's self in. Personally, I am perfectly satisfied that neither the Dadants nor the Roots use anything but what they know to be pure beeswax. So far as I am concerned, I think that my reputation with those who have used my foundation will carry me through. I think that the foundation manufacturers of this country have always had the reputation of using nothing but what they honestly knew to be pure beeswax; and as to taking the position of proving ourselves innocent, it seems to me that is the wrong position. We should be first proved guilty, and then give us a chance of saying something. But this idea of considering a man guilty until he proves himself innocent is wrong.

Dr. Miller—In Europe there are perhaps some 17,000 or more of the Rietsche presses in use; a large number of the bee-keepers making their own foundation. In this country I think there are not nearly so many bee-keepers making their own foundation as there were 25 years ago. I think the reason that so many of those Rietsche presses are used in Europe, and that the making of foundation has been simmered down to a small number of manufacturers, is that in Europe, they cannot buy pure foundation as we can here. I don't have any thought at all about the quality of foundation when I buy it; I know it is pure almost as absolutely as if I had given it all three of the tests mentioned by Mr. Dadant. I think Mr. Dittmer is entirely right in saying every man should be supposed to be innocent until proven guilty, and the burden of proof should not lie upon the manufacturer to prove that he is innocent. I think in the same way Wiley, if he has made that mistake again, should be taught to believe that he should not, after having made such a sad mistake before—that he should certainly not make the third mistake, or the bee-keepers of the country will resent it.

Mr. Abbott—Of course, you are just taking this on my say so, but I have the article and I suppose it is set up in type now and will be in the Modern Farmer in the next issue, and I cut it from the Rural New Yorker. This letter is addressed to the editor of that paper, and signed by Dr. Wiley. It seems the editor of the Rural New Yorker asked for an article with regard to the matter of adulterated honey, and Dr. Wiley is endeavoring to set himself right. It is in connection with the Ladies' Home Journal statement, and there is a whole column in it and the article closes up with the statement I refer to. Of course it was news to me. I thought I had been handling tons and tons of foundation that was pure, or, at least, I had been telling my customers it was pure, and I was standing behind it myself, and I had my reputation at stake and I wanted you people to know it as soon as possible. I thought I would send it to the American Bee Journal, but we like to get "a scoop," and I thought I would copy it first.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Marketing Comb Honey—Getting Bees Out of Supers

I started with 2 colonies of bees one year ago in nailed-up boxes. They stored a little honey and sent out 2 swarms. But this spring we sent for new hives and transferred them, making 7 colonies out of the 4. They are just doing fine; 6 have nearly filled the first supers. We will put on the second supers to-day. I am working for comb honey.

Where is a good place to ship such honey, and how should I prepare it for shipping? There are a good many bees kept around here, so our home market is more than supplied.

What is the best way to get bees out of full supers when taking them off the hive?

I will write again when we take off the full crop this fall. MRS. ETTA BUTLER.

Iowa Co., Iowa.

Even if your home market is pretty well supplied there is a always a chance for competition, and if you put a superior article attractively prepared before the people you may find a pretty good market for it at home, after all.

Still, if you wish to ship it, study the honey quotations in the American Bee Journal, and select from those nearest you. But remember there is a good deal of risk and trouble in shipping, and you will do well to take a lower price at home, making at least a difference of 2 cents a pound between home and distant market.

You can use the Porter escape, in the evening, placing the escape under the super you wish to remove, and by morning most of the bees will be down out of the super, which can then be removed. Or, you can place the supers in a room with screen-doors or windows, allowing the bees to collect on the screens, occasionally moving the screens to let the bees out.

At our house we like a quicker method, and use the Miller tent-escape. We smoke the bees so they will run down somewhat before the supers are removed from the hive, then remove the supers, piling them up 10 or 12 high. If the piles are not so high of course the bees will come out quicker. Now we put on a Miller tent-escape and let the bees come out at their pleasure.

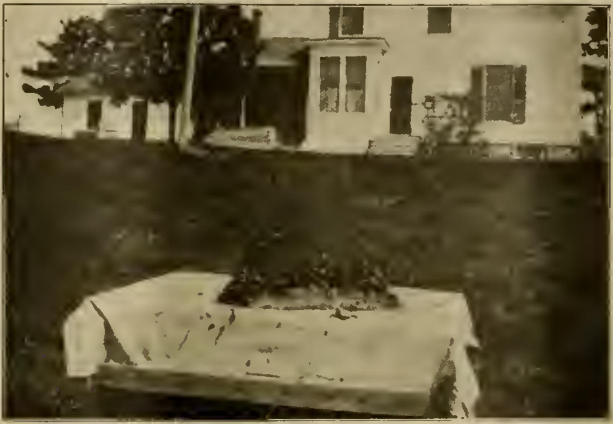
That you may know how to make a Miller tent-escape, the following is copied from Dr. Miller's "Forty Years Among the Bees:"

ROBBER-CLOTH.

I take a piece of stout cotton cloth (sheeting) large enough to cover a hive and hang down 4 inches or more at both sides and at each end. This must be weighted down at the side with lath, and for this purpose I take four pieces of lath about as long as the hive. I lay down one piece of lath with another piece on it, and one edge of the cloth between the two pieces of lath. I then nail the two together and clinch the nails. I use the other two pieces of lath for the opposite edge of the cloth. This makes a good robber-cloth just as it is, but it is better to have the ends also weighted down, especially on a windy day. For this purpose I make a hem in each end, and put in it shot, nails, pebbles, or something of the kind, stitching across the hem here and there so the weighting material will not all run together at one side or the other.

QUICK COVERING WITH ROBBER-CLOTH.

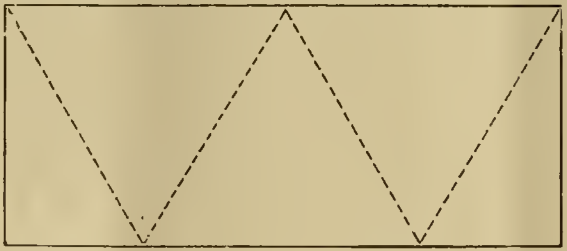
In any case where one wants to cover up a hive quickly against robbers, as when opening and closing the same hive frequently for the sake of putting in or taking out combs, this robber cloth will be found a great convenience. No careful adjustment is needed, as in putting on a regular hive-cover, but one can take hold of the lath with one hand, and with a single throw the hive is covered securely, with no killing of bees if any should happen to be in the way.



MILLER TENT-ESCAPE

MILLER TENT-ESCAPE.

Having made the robber-cloth, an escape, not in the shape of a cone, but in the shape of a pyramid, is fastened centrally upon it. Take three equilateral pieces of wire-cloth, each of the three sides measuring 11 inches. Put them together in the form of a tent, sewing the edges together at the three sides by weaving fine wire through. At the top, however, let each of the pieces be folded out, so that a hole large enough to push your finger in will be left. Lay the tent centrally on the robber-cloth, and mark where the three corners of the tent come. Now starting at each of these points, cut the cloth to the center. Cut away the three flaps of cloth all but about 1¼ inches, and turn this 1¼-inch margin into the inside of the tent and sew there with heavy thread.



Another way is a little easier to do, and it is a little better, although a little harder to describe. Take a piece of wire-cloth 22x9½ inches. Mark a point at the middle of one of the longer sides, and on the other side mark a point 5½ inches from each end, as shown in the figure. Make a fold at each of the dotted lines. The wire-cloth may be cut away at the two outside dotted lines, or, what is better, the end pieces may be folded over and sewed down. Now bring the two parts of the upper margin together and sew with wire, and then proceed to fasten the tent in place as before. In this latter case, of course, a hole must be cut at the top of the tent.

When one of these tent-escapes is placed on a pile of supers, or on a hive containing bees, the bees will pass out freely at the top, but the bees that try to get in attempt to make the entrance farther down. Once in a great while there will gather a bunch of the outgoing bees at the top so as to clog the exit, and then the robbers will settle on this bunch of bees and work their way in, but a little smoke will scatter the bunch of bees.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

PERHAPS A CASE OF SWARMING-OUT.

On page 377, a friend interested in bees, but quite uninformed about them, asks a long string of questions. The answer to the 10th one struck me as decidedly wrong—and being an appointed meddler, I meddle. The fact that the bees clustered and allowed themselves to be hived, although not *positive* evidence that they had a queen, seems to me a strong indication that they had. Bees in a hive which they consider home if they lose their queen just stray helplessly and hopelessly till they dwindle out by death, or by the inroads of moths and robbers. They do not swarm. In a hive which they have not accepted as home yet, they are not likely to stay if the queen is lost—unless there is young brood to nurse, and rear a young queen from. With young brood and a strange hive I think it is a matter of some uncertainty whether they stay or not. If they choose to leave they can abandon the hive without doing it in exact swarming style. "Indiana's" bees had brood, and if indeed they were queenless they chose to stay.

Another thing. Bees eight days after losing their queen would have queen-cells, which they are unlikely to leave. I would infer from this, also, that the queen was not lost. Queenless bees abandoning a hive which they do not consider home, would not cluster in a natural way, if I am right—might begin a cluster, but unlikely to form a complete and quiet one—most likely to throw themselves upon some other hive and try to enter, or, in case no other colony was by, to roam off in search of one. If any remains of their former home were to be found, they might go there and devote themselves to crawling helplessly around.

I should incline to say that the case in hand was a case of "swarming out," so-called. Queen stopped laying when the old colony was broken up. Probably had nearly stopped before by reason of short supplies. Hungry and discontented they felt still more discontented when the last brood was sealed. When there is little to eat, and nothing to do, a "hungry swarm," as they call it over in Europe, is quite in order. When put back they might be expected to stay for awhile. (Roosting in a tree-top did not strike them, on trying it, as improving the situation much.) And it transpired directly after that the honey-supply improved; and on that account they gratified their owner by flying out and in more. After all is said, however, I will grant the possibility of bees *long time* queenless forming a quiet cluster in a tree.

TIME REQUIRED FOR SWARM-CLUSTERING.

When I first read Mr. Doolittle's article on how bees find their future home, I was taken a-back by the statement that a swarm clusters in from two to five minutes after coming out. Had it been some of our rank and file I should have smiled and said, He never actually timed bees with a watch, and his guess was quite a bit too small. But Mr. Doolittle rarely, if ever, lets things go with a mere wild guess. My first query was with myself. Does time seem longer to me just because a swarm is out? and have I been greatly overestimating? Well, swarms galore have been out this season, and (when not too much rushed) I have been timing them by the watch. I was not mistaken, so far as the strain of bees in my yard is concerned. They spend from 7 to 15 minutes on the wing.

Now the much more important question recurs, Do different strains of bees, and different yards, have different habits in this regard? If that's the case, it would explain some differences of opinion about certain other matters. Presumption favorable to the affirmative, to begin with. It's too late to ask for observations this season, but will not those who have the actual time of their bees please report? It's possible we shall find that different years differ. Quite possibly I *have had*, some time, a swarm come out and cluster in two minutes, but it is very, very rare if ever. The behavior of swarms in nearly all respects certainly takes a great range of variation I think I wrote long ago that bees have forty different ways of swarming. Page 390.

PUTTING WEAK COLONIES OVER STRONG ONES.

Edwin Bevins gives us, on page 452, a timely though small experiment—two weak colonies put over two strong ones without intending to unite. Total failure, so far as the object in view was concerned. Both queens of the weak colonies disappeared in ten days. The scheme is important enough to justify many more reports, small and large.

BEE ODORS AND SENSE OF SMELL.

And so Arthur C. Miller must be getting after the bee's sense of smell as one of the old superstitions. All right. I'll hold his "bunnit" if somebody else doesn't get the job ahead of me. But until he *proves* something (as his first onslaught does not seem to), he must let us keep on using the familiar language about the bee's keenness of scent. Time enough to "go ahead" with new phrases when we are sure they are right. The dog (to an absolute certainty) recognizes his master by smell—and it's also certain that he has other means of recognizing him besides smell. Probability pretty strong that the same is the case with bees recognizing each other—also, that they are sometimes quite hateful to hivemates when they do recognize them as such—and sometimes quite peaceful toward aliens when they recognize them to be aliens. To cite human parallels, the smell of the Negro is different from the smell of the Caucasian (for the Caucasian race has a distinctive smell); and the smell of the Chinaman differs from both. This shows that there is no ingrained absurdity about one little nation of bees differing slightly from another little nation. Page 453.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to Dr. C. C. Miller, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

A Swarm in a Chimney—Shade for Bees—Queenless Colony—Bee-Birds—Swarming—Taking Off Honey

1. How can I get a swarm of bees out of a chimney into a hive? Can I do so after they have started to build comb?

2. I have been told that all new swarms should be put in the shade and the old ones in the sun. Is this true?

3. If a colony is queenless will the bees rear a queen if given some brood?

4. How can I capture bee-killing birds?

5. When a swarm clusters and separates in two bunches upon the same limb, are there two or more queens?

6. How long before all the bees have left the super should a bee-escape be used?

Iowa.

Answers.—1. It depends upon the particular conditions. Possibly all is within easy reach, so that you can easily get at the swarm and treat it just as if it was in a hive. If not, you can go at it in another way. Place a Porter bee-escape over the chimney, and over that a hive containing at least one frame of brood, the rest of the hive being filled with combs, frames of full foundation, or starters. The bees that come out, not being able to get back any farther, will settle in this hive, and at the end of 3 weeks you will have about all the bees, even if they have had comb and brood.

2. There is good reason for putting a newly-hived swarm in the shade, but I don't know why it isn't just as well to have an old colony also in the shade.

3. Yes, but it is much better to give them with the brood a sealed queen-cell.

4. Shoot them, then you can easily catch them. Perhaps, however, you might trap them, if you knew the kind of bait that would attract them.

5. Maybe, and maybe not.

6. The time varies. Sometimes the bees will be all out if the bee-escape is left on over night, and sometimes not. They are a help, but if you are in a big hurry they are too slow. That means escapes that allow bees to go down into the brood-chamber. The Miller escape, which is put on a pile of supers when they are taken from the hive, will be likely to leave the supers clear of bees if left on for half a day. For my own use I like these very much, but a man is likely to think well of his own baby. (See page 570.)

* * *

White Flakes in Front of the Hive—Smoker Open at Both Ends

1. Last evening we had a telephone call to "bring a hive and take these pesky bees out of my grove." We did as we were told, and soon had the swarm transferred from the limb of a tree to a hive. I hived them on 2 drawn combs and 6 frames with full sheets of foundation, then set them in the apiary. To-day noon we notice the ground is strewn with little particles of white flakes, and is fairly white in front of the hive. Of course I know they claim this is wax from the bees. I could fill three or four thimbles from what is on the ground, and there was a lot of it on the limb from which I took the bees. This has a tendency to cause me to believe wax is spittle. The bees certainly have a place to use it in those 6 frames of foundation, if it is wax. Had the bees been put on a full set of drawn combs I should have thought nothing of it. This is the first time I ever saw so much of it.

2. Is there a smoker made that can be opened at each end? If we could open the breech end to relight when the fire goes out it would be lots handier than pulling out all the wadding from the top just to get a light into it.

Iowa.

Answers.—1. You are right as to the similarity between wax and spittle, at least to that extent that both are secretions. But if you are hinting that the little white scales that you could pick up by the thimbleful are any other than beeswax, you will have trouble to establish your point. Even if that colony was wasteful, and didn't use all the wax that was secreted, that doesn't prove that it was not the genuine article. Haven't you seen a good many pellets of pollen dropped and wasted? But you didn't conclude from that that it was not good usable pollen. If you will make good use of Joe's eyes when bees are busy building comb, you can satisfy yourself pretty thoroughly that the little pear-shaped scales are nothing but pure wax, fresh from the bee-factory, when you see the bees bringing them into use, a scale sometimes being plainly seen stuck onto the progressing work.

2. So far as I know there is no smoker made that opens at both ends. I have had breech-loaders, but I don't believe you would like them. In general we want to pile fuel on the fire, not under it. But it would be an easy thing to have a smoker constructed so as to load at each end, and I've no doubt you could get one by paying a little extra. But it's so seldom that a smoker needs relighting, that it would be only a nuisance to have it open at the bottom. There's something wrong with the fuel, the smoker, or with Joe, that allows the fire to die out till it burns out, and I don't believe a double-ender is the proper solution of the difficulty.

* * *

Bees Filling a Super—A Play Spell—Straight Combs—Storing for Winter

1. How long does it take a strong colony of bees to fill one super? I put one on July 6, and they started to work in it right away. It holds 24 sections.

2. What makes the bees gather and waste time by flying in front of the hive about a half hour every day? About a week ago I raised the hives an inch in front, but they still do it.

3. I used full foundation sheets in all my hives, and still the bees have not made straight combs, but have bound them together here and there. What causes this? How can I separate them so I can pull them out one by one? If done once, will they connect them again, or how can I hinder this?

3. Will the bees stop working in the supers of themselves in time to fill their frames below for winter? If not, what shall I do?

5 Some time ago I bought a large prime swarm and had to haul them 4 miles, but I did not give them air enough, and when I came home I had only one pint of bees left. I cleaned out 13 quarts of dead bees, and then introduced a queen to them July 4, which they accepted. Will they build up before winter, and get enough honey to take them through till next spring?

Wisconsin.

Answers.—1. It may take all summer, and it may take 3 or 4 days. Either of these would be an extreme case. Perhaps 10 days to 2 weeks would be something like an average for filling and finishing; for it takes some time after being filled for the sealing to be finished. If the bees have abundance of room 2 weeks will be a pretty short time.

2. Bless your heart, you wouldn't grumble because children waste time playing, would you? Those bees are having a play spell, and raising the hive a foot wouldn't stop them. Don't worry, it's good for them.

3. Without seeing the case it's hard to answer; but if the work is properly done nothing of the kind should happen. I suspect just a little that you have put in the foundation without foundation splints or wiring, and that the foundation, being loose, has flopped about so as to touch in places. The foundation should be fastened securely in the middle of the frame, and then there would be no trouble. Carefully pull the frames apart, if necessary cutting apart the places that are fastened together; gently push toward the center of the frame any parts that are to one side, and when returning the frames don't have them just as they were, but turn every other one end for end. Then the same places will not come together as before; and after 4 days or more repeat the process if they are not yet all straight.

4. Yes, generally; but it is always well to have on hand some extra combs of sealed honey to give to any needy colony.

5. I don't know; they may if the season is remarkably good. The probability is that you will need to give them combs of honey or feed them otherwise.

* * *

A Reporter and "The King Bee"

You will see the "king bee" mentioned in the accompanying clipping taken from the thrice-a-week World, of New York. I have been a bee-keeper since 1868, and as yet I can't say that I ever saw a "king bee," unless it is a drone; and if Mr. Fry was stung to death by a drone, don't you think they should have allowed him more space than a mere 1½-inch item in a newspaper?

Is it through my ignorance that I ask what is a "king-bee?"

I have been located here in Cuba with apiaries since 1899, and now have 4 apiaries.

Cuba.

Answer.—No, you never saw the king bee mentioned, for you never looked in the right place. This king bee had a sting that worked telescope fashion, and when opened out to its full extent was 1⅞ inches long. If you want to see him, don't go to looking through hives, but take a 2-inch auger and bore a hole through the skull of the reporter that wrote that item, and when you reach his brain there you will find that king bee in all his glory.

The newspaper item referred to reads as follows:

STUNG TO DEATH BY A KING BEE.

Lockport, N. Y., June 19.—James T Fry, a farmer, aged 83 years, succumed this morning to injuries received in an encounter with a honey-bee. Fry was moving the bee-hives on his farm near this city last evening, and in so doing angered the honey-makers. A king bee attacked Fry and stung him several times in the face before Fry succeeded in killing it. He was chased to the house by a swarm of the indignant insects. Blood poisoning quickly developed in the wounds made by the king bee, and affected the heart, causing Fry's death within 12 hours.

* * *

Swarming in Black Hives—Loaf Sugar for Bees—Starters in Sections

1. At the last bee-keepers' convention held in this city, a gentleman stated that if hives are plainted black and set in shady places, the bees will not swarm. Have you tried this method with success?

2. Loaf sugar as a food for bees has been mentioned recently in the American Bee Journal, and was I think, tacitly commended by

Mr. Hasty. What are your objections, if any, to using it in winter in place of candy?

3. If one uses inch starters at the top of sections, do you think it advisable to place starters at the bottom of sections also?

CONNECTICUT.

ANSWERS.—1. No, I never tried it. If he meant that when a colony is set in the shade, the hive being painted black it will not make it swarm any more than being painted white, he was right; for when a hive is kept in the shade the black can not absorb the direct rays of the sun. If he meant that if you paint a hive black and set it in the shade, the colony in such a hive will never swarm, he was as wrong as wrong can be. A colony in the shade will not be as sure to swarm as if in the sun, but so far as black paint makes any difference, that difference will be in favor of swarming.

2. I never tried it, and don't know whether it would be as good or not. If there is any objection, it would be the danger that there might not be enough moisture for the bees to use the dry sugar. In most places that might not be an objection at all. But the safe thing would be to try it at first on a small scale.

3. The size of the top starter has nothing to do with the need of a bottom starter. The object of the bottom starter is to get the comb well fastened to the bottom-bar of the section, and this is needed just as much with a small as with a large top starter: if any difference, it is more needed.

Reports and Experiences

Bees Doing First-Rate

I bought 2 colonies, giving $4 a colony for them last spring. I brought them home May 20, and have had 2 swarms which are doing well The first swarm is filling the second super. If I can do as well for the bees when they need my help as they are doing for me now, I can talk to N. E. France.

WM. MATTHEWS.

Grant Co., Wis., July 3.

Good Price for Honey—Wintering Bees

I am the first one who kept bees in this county, and when I first began to talk about them some people thought I had a screw loose somewhere. I sent for 20 hives this spring for different people. I spent over $100 before I got a live bee, but since we have a railroad here I am all right. I get as high as 50 cents per pound for my honey.

My first swarm issued May 21, and the bees are still swarming.

I winter the bees outdoors in winter-cases, and I can keep my bees out when the thermometer is 30 degrees below zero. I will write about my experiment later on.

Last week we had company who took my bee-hives for tombstones. They said they did not know that I had been living in a graveyard!

FRED HOFFMAN.

Fergus Co., Mont., June 28.

Weather Hard on the Honey Crop

I had 6 colonies of bees, spring count, and increased to 16 this summer. All are in good condition, although the dry summer has killed all the white clover, and bees are doing nothing. They did very well in the fore part of the summer, but from all appearances I will have to feed if we should not have a fall honey-flow.

I have supers on all except 4 hives, and the bees have started to work in all of them. Some were very nearly full when the flow ended like magic. I took off about 100 pounds of pure white honey the beginning of June, and everybody says it was the nicest they ever saw. I retail my honey from the house at 18 and 20 cents a section, and have 2 grades by weight. We have had no rain of any account all summer, or this would have been a hummer for honey.

I can not be without the American Bee Journal because I get all my information out of it, and it is a welcome visitor every week.

GEO. M. SEIFERT.

Northampton Co., Pa., July 28.

Bees Not Doing Well

My bees are not doing very well this season. There seems to be no nectar in the white clover. One colony I have had for 4 years, from which a swarm has never yet issued, but it does the work.

W. H. HOBERT.

Dekalb Co., Mo.. July 28.

Discouraging Time with Bees

This year I have had the hardest fight I've had since I went into the bee-business. When the white clover came into bloom the rain during May destroyed the entire crop. Then came on the crimson clover, and met a similar fate, and dry weather in June got what little buckwheat there was. My bees seem to live "from hand to mouth" with nothing in the brood-chamber.

Time and again I've attempted feeding the weak colonies, placing the Boardman feeder inside and contracting the entrance to barely a bee-space, but robbers come "to beat the band."

My only salvation now is our fall flow of honey, though from my 50 colonies I do not expect to get a pound of surplus honey, because they are so awfully short of supplies. I hope no one else is having these things to contend with.

GEO. M. PHIFER.

Mecklenburg Co., N. C., July 10.

White Honey Harvest a Failure

The white honey harvest is a failure here. There was much white clover bloom which yielded quite freely early, but failed to yield later. The weather was too cold, especially at night. To-day it is rainy and cool. I have taken only 20 or 25 supers of finished honey from about 70 colonies run for comb honey. Most of the hives now have on 2 supers each, and there are but very few finished sections to be found.

EDWARD BEVINS.

Decatur Co., Iowa, July 25.

Doing Well With the Bees

I bought a 2-frame nucleus last year, which built up into a strong colony. In the spring of this year I put another hive on top of the one they are in, and now both hives are full of comb, with some honey at the top of each frame and the rest filled with brood. I expect to take 3 or 4 frames of brood from them to put into other hives. This is my first experience in such work, but I have "A B C of Bee Culture," and I think I will get along.

The bees have not swarmed this year. The king-birds are here every day. I often see them catch drones, and I think they have caught queens.

JOEL F. LEE.

McLean Co., Ill., July 5.

Finding Queens

I seem to have made a little discovery in the matter of finding queens, that is worth reporting, as it enables us to find the queen in any old hive, whether combs can be lifted out or not, and in properly constructed hives it is much abbreviated.

If a box-hive is used make a hole, or two, if preferred, say an inch auger-hole, (if there isn't one already) in the top and near the back part of the hive; then pour a good volume of smoke in at the entrance, keeping it up until the hive is pretty well filled. Very soon the bees begin pouring out at the hole, and in every instance that I have witnessed the queen was among the first.

In using the simplicity hive I slipped the enamel cloth forward so that about an inch at the back was uncovered. They poured out here and she was soon picked up with very little trouble and no harm whatever was done to the bees.

It might be a good plan to set the hive on an oilcloth, sheet, or the floor, if one is afraid the plan may not work successfully at first, then they would spread out over the back of the hive and on the cloth where she could be looked for. But with a little experience such precaution will be unnecessary. Remember, a good volume of smoke must be used, enough to start the bees at once on a stampede to get out.

DAVIS R. EMMONS.

Champaign Co., Ohio, Aug. 1.

CONVENTION NOTICES.

National.—The International Fair is to be held in San Antonio, Tex., Oct. 21 to Nov. 1. When this Fair is in progress there are very low rates in force on the railroads out for 600 or 700 miles. Then there are harvest excursions from the North on the 2d and 4th Tuesdays of the month. The 4th Tuesday in October comes on the 24th. Considering these facts, it has been decided to select Saturday, Oct. 28, as bee-keepers' day at the Fair. This will give ample time for members from the North to reach the city by starting the 24th. The regular sessions of the convention will begin Monday, Oct. *30, and continue three days.*

The headquarters of the National Association will be at the Bexar Hotel (pronounced Baer, long sound of a), corner of Houston and Jefferson Sts., and rates are only $1.00 a day, and up. The convention will be held at Elks' Hall, 125 W. Commerce St., only two blocks from the Bexar Hotel.

Flint, Mich. W. Z. HUTCHINSON, *Sec.*

Missouri.—The Missouri State Bee-Keepers' Association will meet in Sedalia, Aug. 22 and 23, opening session to be at 2:30 p.m., Aug. 22. The room to meet in will be named later on. The State Fair meeting there at the same time will obtain low railroad rates from all parts of the State. The Livestock Association also meeting there on the 24th will give us some inspiration. Hon. Geo. B. Ellis, Secretary of the Agricultural department, will be there and give a talk and lend a helping hand. Louis A. Osborn, of that place, has kindly offered to act as host, and will direct to the place of meeting and to accommodation. Hotel accommodations can be had at $1 to $2 a day. Private boarding cheaper. Let us turn out en masse and have a glorious time as well as to effect some extraordinary progress.

W. T. CARY, Sec.

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What They Say of Our Queens

◆

George W. York & Co.
After importing queens for 15 years, you have sent me the best. She keeps 9½ Langstroth frames fully occupied to date, and although I kept the hive well contracted, to force them to swarm, they have never built a queen-cell, and will put up 100 pounds of honey if the flow lasts this week. Chas. Mitchell.
Ontario, Canada, July 22, 1905.

George W. York & Co.
The two queens received of you some time ago are fine. They are good breeders, and the workers are showing up fine. I introduced them among black bees, and the bees are nearly yellow now and are doing good work. A. W. Swan.
Nemaha Co., Kans., July 15, 1905.

George W. York & Co.
The queen I bought of you has proven a good one, and has given me some of my best colonies. N. P. Oglesby.
Washington Co., Va., July 22, 1905.

George W. York & Co.
The queen received of you a few days ago came through O. K., and I want to say she is a beauty. I immediately introduced her into a colony which had been queenless for 20 days. She was accepted by them, and has gone to work nicely. I am highly pleased with her and your promptness in filling my order. My father, who is an old bee-keeper, pronounced her very fine. You will hear from me again when I am in need of something in the bee line. E. E. McColm.
Marion Co., Ill., July 13, 1905.

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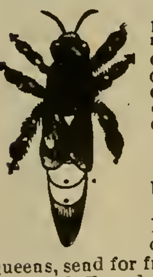

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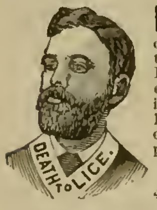
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on poultry amounts to many times the cost of **Lambert's Death to Lice**—the sure preventive. Loss can be saved and profit made by its use. Frees sitting hens from lice without harming eggs or chicks. A trial 10c box will prove it. 100 oz., by express, $1.00.

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Honey and Beeswax

CHICAGO, Aug. 4—Fancy white, 14c; No. 1, white, 13@13½c; fancy amber, 11@12c; No. 1, amber, 9@10c; fancy dark, 10c; No. 1, dark, 9c. White extracted, 6@7c; amber, 5@6c; dark, 5@5½c. Beeswax, 28c.

The new crop is appearing and selling in a fair way considering that this is midsummer time. R. A. BURNETT & CO.

ALBANY, N.Y., July 26.—There is some call for honey, new crop, and if here would probably sell for best prices of season, as the general impression is there will be a large crop. White comb honey will start off at 15c to early buyers. H. R. WRIGHT.

KANSAS CITY, July 20.—New comb honey has made its appearance; fancy white in 24-section cases selling at $2 75 per case; No. 1 at $2.50, and good demand. There is no new extracted in as yet, market on old stock being quotable at from 5@6c. Beeswax, 25@28c. C. C. CLEMONS & CO.

PHILADELPHIA, July 19.—The outlook for honey is very good. Some lots of new white honey have already arrived and are selling in a small way, according to grade, from 12@14c. New extracted honey is selling: Fancy white, 6½@7c; amber, 5½@6½c. Beeswax in good demand at 28c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

CINCINNATI, Aug. 2.—At this writing there is a good demand for extracted honey; shipments are arriving daily. New comb honey is coming in quite freely, although the demand is only fair, a condition which may be expected early in the season. We quote amber extracted in barrels and cans at 5¾@6½ cents respectively. White clover extracted at 7@8½c. Fancy white comb at 12@15c. Beeswax, 26c.
THE FRED W. MUTH CO.

DENVER, June 26.—The demand for both comb and extracted honey is light at present, and there is enough of old stock on hand yet to last until the new crop comes in; the same is selling as follows: No. 1 white comb, per case of 24 sections, $2@$2.20; No. 2, $1.75@$2. White extracted, 6½@7½c per pound. Beeswax, 26c.
THE COLO. HONEY-PRODUCERS' ASSN.

NEW YORK, June 19.—The comb honey market is very quiet and we are hardly justified in making quotations, Some few lots are sold here and there at 13c for fancy, and 10@12c for lower grades, but no large blocks could be moved at these figures. There is still considerable of last year's crop unsold, part of which, no doubt, will have to be carried over until the fall. Extracted honey in fairly good demand. New crop California honey selling at 6½@7c for water-white, 6@6½c for white, and 5@5½c for light amber. Southern at 50@60c per gallon according to quality. Beeswax somewhat declining; choice average stock selling at 29c.
HILDRETH & SEGELKEN

CINCINNATI, O., July 17.—There is no demand for comb honey on account of the warm weather. Extracted is in usual demand for this season of the year. We quote white clover at 7@8c; amber, in barrels, at 5¼@5½c; in cans, 5¾@6c. Beeswax, 28c. C. H. W. WEBER.

SAN FRANCISCO, July 19.—White comb, 1-lb. sections, 11@—cents; amber, 8@10c. Extracted, water-white, 5@—cents; white, 4¾@—; light amber, 4@—cents; amber, 3@3½c; dark amber, 2½@—c. Beeswax, good to choice, light, 27@29c; dark, 25@26c.

There is now plenty of new honey of good quality on the market, but it is moving slowly and prices continue weak. Prices for all grades of both extracted and comb honey are ruling lower than last year, and even at the low prices there is a tendency for stock to accumulate.

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BEE KEEPERS SUPPLIES

APIARIAN EXHIBIT AT THE WEST MICHIGAN STATE FAIR, HELD AT GRAND RAPIDS, IN 1904
(See page 582)

* * *

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY

334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

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What is the United States Government Doing for the Bee-Keeper?

A Corner of the Government Apiary where the Caucasian and Carniolan Colonies Stand. Photographed by D. E. Lyon.

Do You Know?

Do you realize to just what extent Uncle Sam has the interest of his bee-keepers at heart? Few do. To get the whole truth we have sent Mr. D. E. Lyon to Washington with instructions to place before the readers of Gleanings just what is being and what intends to be done by the Division of Apiculture of our great National Department of Agriculture at Washington. Mr. Lyon gives the results of his journey in the August 15th number of Gleanings. What he tells is intensely interesting, and every bee-keeper should know the facts. Mr. Lyon has also obtained some splendid photos, which are reproduced in this number.

Mr. Frank Benton, head of the Division of Apiculture, is now on a journey around the world in search of new Bees and Honey-Plants. Gleanings keeps in close touch with him, and its readers are always sure of obtaining news first hand of this most remarkable trip.

Grading Rules

In the August 15th issue of Gleanings is found another article of greatest practical value to bee-keepers. It is headed, "Comb Honey Grading Rules." Hardly one bee-keeper in ten understands grading, which is of such importance in marketing comb honey. For this reason there is much confusion and loss. Gleanings has written to the most prominent Honey Dealers all over the United States, and gives their replies in this number. It's an important thing to know how to grade your honey, and Gleanings tells you.

Superb Illustrations

The illustrations in the August 15th issue of Gleanings are typical of what its readers receive every number. Three full-page halftones, some smaller ones, and many line drawings illustrating the numerous short articles. The halftones are the work of the finest engravers in the United States, and are printed on the best paper, giving results that are hardly equaled in many high-class magazines. This item alone doubles the value.

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Gleanings aims to make itself indispensable to *every* bee-keeper *everywhere*. It has succeeded. No progressive bee-keeper can afford to be without it. In every issue are departments that cover the peculiar conditions that are met in different parts of the country. The editors of these departments are the best practical bee-keepers in their respective localities. The best of bee-keepers everywhere contribute. A list of them would be a list of the most successful bee-keepers in the United States. What bee-keeper can not profit by reading the experiences of such men?

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AMERICAN BEE JOURNAL

(Entered at the Post-Office at Chicago as Second-Class Mail-Matter)

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor
CHICAGO, ILL., AUGUST 17, 1905
Vol. XLV—No. 33

Editorial Notes and Comments

The Honey Crop of 1905

Editor Root gives the following paragraphs on the honey crop conditions, in Gleanings in Bee Culture for Aug. 1:

> Although the reports have not come in as freely as I could desire, yet, taking all sources of information, including such reports as we have received, I am not far from the truth when I say the crop has been a light one, taking the United States as a whole, and an entire failure in many localities. The conditions in California and Texas are not materially different from those already reported. In the southeastern part of the United States, particularly in North Carolina, the season has been almost a failure. Apparently Michigan, Wisconsin, possibly Minnesota, northern Illinois, and Ontario, Canada, will have a fair crop of honey. The prospects were dubious two or three weeks ago, when there was a change for the better. New York and Pennsylvania report all the way from a fair to a poor season. New England seems to be in the doubtful list yet. Colorado will be very much behind its general average; and this is particularly so for the Western Slope.
>
> ......Those who are located in the clover belt, where there is still considerable white clover in bloom, as well as pea-vine and common red, will do well to look to their bees and see what they are doing. Do not give up yet. You may get a fair crop of honey. The recent rains, which appear to be general, came just as it was beginning to get a little dry. Queer season this.

An old and experienced honey-dealer once said, "There is always enough honey somewhere to supply the demand." If you can get a fair price for your honey better not hold it, but sell, as later on it may turn out to be like last season—many held their honey, and then a lot was dumped on the market all at once, which caused the price to drop away down.

Mating and Swarming of Virgins

Do bees sometimes swarm out with the only queen they have, leaving the colony hopelessly queenless? Does the colony, or part of it, generally, or sometimes, go out with the virgin queen when she goes out to mate? Not a few have answered both these questions in the affirmative. Mr. Muth-Rassmussen is quoted by Mr. Doolittle, in Gleanings, as saying that when a queen is lost in any way, and the bees rear a successor from her brood, "when the virgin queen flies out to mate, the bees will swarm out with her and will settle on a tree or bush, like a normal swarm." Mr. Doolittle never knew of any swarm going with a virgin queen without a rival queen being left in the hive, said rival being generally confined in a queen-cell, and says:

> "So far as my experience goes, a swarm goes out with a virgin queen only when there are rival queens left in the hive in the shape of other virgin queens in queen-cells, and when all but the last virgin have gone out with swarms, or been disposed of by the bees or by the queen that is at liberty in the hive; then, a few days later, this remaining queen goes out to meet the drone alone, *with none of her bees accompanying her*, is fertilized, and soon becomes mother of the colony."

Opinions on both sides are likely to be forthcoming, and it will be interesting to note the outcome. It will be a good thing if there can be a positive decision, unless, indeed, it happens that bees in California are not governed by the same laws in such cases as are those in New York.

Sainfoin as a Honey-Plant

This plant, *Onobrychis sativa*, continues to loom large in Canada. The question arises, Why is so little said about it further south? "A York County Bee-Keeper," in the Canadian Bee Journal, makes a point in its favor which gives it distinct value; it differs from other clovers in that it appears to yield nectar early in the morning, the bees working on it fully an hour before they do on alsike and white clover. Also, that the first bloom comes between fruit-bloom and white clover, and the second crop when there is a dearth from other sources.

John Fixter, apiarist of Central Experimental Farm, who has done much to bring this plant into prominence, sends the following to the Canadian Bee Journal:

> I am so pleased with the results of our sainfoin test that I feel it a duty to bring it again to the notice of our friends. The small field sown in the spring of 1904 was sown on poor, sandy soil, and therefore did not do very well the first season, it did not even bloom. Not being discouraged, we allowed it to stand over. Since spring it has made fairly good growth, coming into bloom June 9—white clover bloomed June 14, and very little out at that date. Bees are working so well on the sainfoin that a bee-keeper standing in the center of the field would be looking where the swarm was—every plant has a bee on it. We can not do too much by way of bringing this wonderful plant before the notice of our friends. It is not only a honey-producer, but makes such excellent fodder, and will produce honey each time it blooms.

Colonizing Bumble-Bees

Speaking of the relentless war that has been waged on most farms against bumble-bees up to a few years ago, because of the difficulty of harvesting hay with several bumble-bees' nests in the field, a writer in the Farmers' Review says:

> "Now, we are coming to see that we have done a foolish thing in exterminating these insects, upon which depends the entire crop of red clover seed. Doubtless they can be colonized, and their habitations fixed at a distance from the fields that have to be cut over."

So far as reported, all attempts in the past to colonize bumble-bees have been unsuccessful, and it is doubtful that much can be done in that direction in the future. Their habits are quite unlike those of the hive-bee. A single female or queen starts out in business in the spring, all by herself. Some of her progeny come to her aid, but a nest of bumble-bees remains always a diminutive affair compared with the thousands in a hive of our honey-bees. There are no combs made of wax, larvæ and honey alike being contained in cups formed in the pollen-mass, so movable combs are not likely to be viewed by them with favor. The same writer says:

> "At this time of year they would be hard to get, as the broods hatch out later, but it is the second crop of clover that produces the seed and not the first, and that is the crop that is fertilized by the new broods of bees."

That's a little like saying that the moon is more useful than the sun, for the moon shines at night when it is dark, and the sun shines only in the daylight. To be sure, the bumble-bee is needed to fertilize the blossoms of the second crop of red clover, but many farmers seem to think there is something in the nature of the plant that makes it willing or able to produce seed only on the second crop. If bumble-bees were present in sufficient number to fertilize the blossoms of the first crop, why should it not produce seed as well as the second?

Miscellaneous News Items

Pres. Jas. U. Harris, of the National Bee-Keepers' Association, surprised us with a call last week, when on the way to his Colorado home from eastern Pennsylvania, where he had been attending the funeral of his aged mother. Mr. Harris was looking very well. He has an apiary of nearly 100 colonies in Mesa Co., Colo., but reports the honey crop almost a failure in his locality, and exceedingly small for all of Colorado.

N. E. France, State Inspector of Apiaries for Wisconsin, reports that he has the bee-diseases nearly wiped out of that State. He says that a few bee-keepers have been careless, and so have not cured every case. Of course, it is necessary that bee-keepers co-operate fully with the inspector, else no disease can be completely eradicated. Mr. France certainly has done a good work in Wisconsin, and deserves the thanks of all its bee-keepers.

A Bee-Keepers' Field-Meeting will be held at The A. I. Root Co.'s exhibition apiary at Jenkintown, Pa., Thursday, Sept. 7, 1905, in which will unite the Pennsylvania State Bee-Keepers' Association, New Jersey State Bee-Keepers' Association, Philadelphia Bee-Keepers' Association, New York bee-keepers, and all bee-keepers and others interested in bees, from the surrounding territory. Jenkintown is a suburb of Philadelphia. If bee-keepers in that locality desire further information, they can address Wm. A. Selser, Jenkintown, Pa.

The West Michigan Fair Apiarian Exhibit of 1904 is shown on the first page. Beginning at the left of the picture the exhibits belong to: Mrs. C. I. Smith, of Grand Traverse Co.; Oscar Smith, of Kent Co.; W. D. Soper, of Jackson Co.; and A. G. Woodman Co., of Kent Co.

In order to get a picture of all the exhibits the plan of the exhibit of A. G. Woodman Co. is not fully shown. Comb honey was piled up in the form of a house, with comb foundation for the roof, pyramids of beeswax for spires, full sheets of foundation in sections for window-sashes and window-panes, etc. A neat little sign over the door bore the words: "Home, Sweet Home."

All the exhibits were very nicely arranged, as can plainly be seen.

The premium awards were well distributed, all exhibitors winning some of the money, so doubtless all were well satisfied. W. Z. Hutchinson acted as judge, and also took the photograph of all the exhibits.

The apiarian department commanded as much attention as any other on the grounds, and the bees were especially interesting to the school children and the school teachers. It is hoped that a great many more exhibitors will participate at the coming Fair, which is to be held at Grand Rapids, Sept. 18 to 22, inclusive. Mr. A. G. Woodman is the superintendent of the apiarian department. It is his desire that enough more exhibitors will take part this year so as to fill one entire wing of the 8-winged octagon Cross building—Art Hall. The premium list has been increased by $50 for the coming Fair, and no doubt if a due appreciation of the generous premium list is shown by bee-keepers, more money will be offered in premiums in the future.

For further information, address Superintendent A. G. Woodman, Grand Rapids, Mich.

John P. Coburn, of Middlesex Co., Mass., is a bee-keeper 72 years old, and has some 50 colonies. In the Boston Globe, for July 23, he is pictured as handling a frame of bees, with a veil on, etc. There is quite a nice write-up of his apiary and bee-keeping experience. Last year he had one colony that produced 104 pounds of honey, and another 102 pounds.

Such illustrated articles in the daily newspapers can hardly fail to be helpful in increasing the use of honey, as they call attention to it in the best way possible. Wherever it can be done, it would be a good thing to invite newspaper editors to visit your apiary, and show them the inside workings of the hive. Then, as they leave, be sure to give them a sample of nice honey, so that they can write intelligently and from personal experience. Of course, when possible, it is safer if the visited bee-keeper can have the privilege of reading the proof of what is written before it is printed.

The "Farm Journal" Apologizes.—In the Farm Journal for July, "Aunt Harriet," who had something to say about manufactured comb honey several months before, has the following paragraph:

> Just one more reference to the statement about adulterated honey and artificial comb. As I neither eat nor buy honey, I based my opinion on newspaper reports, magazine articles, and the complaints of those who try to buy good honey. Wm. A. Selser's article, "The Honey-Bee," in the May number, will enlighten the consumers; the producers know the truth; and to all who read my mistake, I offer my sincere apologies.

That is a splendid utterance. "The producers know the truth"—yes, that is the best source of information to go to when wanting facts about any special business. It is not safe to attempt to write for publication on any unfamiliar subject. Even when fairly well acquainted one sometimes gets things twisted.

"Combed" and "Extracted"

A Plan for Increase

The method of increase given here secures queens for the new colonies reared under the swarming impulse, and the workers also which bear her company are fully developed, and have not been half starved in the larval state as so many young bees are apt to be where the apiarist interferes.

It will usually happen during the swarming season that several swarms will come off on the same day, or within one day of each other. Hive each of the swarms on the old stand and place the old colony containing the young bees and queen-cells beside the new hive with its entrance facing in the opposite direction. Take the half-filled supers and put them on the new swarm in the way most bee-keepers are familiar with.

Just a word of caution here: When handling any hives or frames containing queen-cells use the utmost care to see that they are not jarred in any way as such treatment will destroy a large percentage of the unhatched queens.

The queen-cells in the old colony if the swarm has been a normal one, will be just about ready to cap over when the swarm issues, and in a day or two at the most the best of them (which are the oldest) will have been capped over.

Now we will suppose that this same procedure has been followed with two swarms that issued at the same time. If there is any choice in the stock, that is if one has proven superior to the other in honey-gathering qualities, or in other desirable traits, then arrange to preserve the queen-cells in it.

Two or three days after the swarms have issued, or when most of the cells are capped over, and when quite a number of young bees have come out of the hatching brood, shake the colony containing the cells, which you don't wish to keep, down at the entrance of its swarm, pinch off all the queen-cells from the frames, put the frames back in the super and set the super on top of the other hive containing queen-cells and young bees. There will be enough young bees in this hive to look after both lots of brood.

In 5 or 6 days from the time the swarms issued you will have a lot of ripe queen-cells just about ready to hatch; most of the brood will be capped over and the 2-storied hive will be crowded with young bees, the majority of which have never been outside.

Now is the time to make the division—place 8 or 9 hives where you want the new colonies to stand; see that the same number of frames contain a queen-cell each; put 2 frames (one with queen-cell attached) and all adhering bees into each new hive, give each new hive an extra frame of honey if you can spare it, if not never mind, but look out later when the queen starts laying, and see that they all have plenty to keep them going. Shut the little hives up tight until the evening of the following day if the sun is not too hot; if it is, then leave them open.

Avoid setting the new hives in a row so that their entrances all face in one direction; scatter them about in odd corners of the yard, or if you have an eye for symmetry in your arrangements you can put them in groups of four with the entrance of each hive in the group facing in a different direction from the rest.

It will thus be seen that from 8 to 10 colonies can be secured with the best of queens from the brood of 2 old colonies and the young bees of one. Nothing is taken from the swarm, and in fact one swarm is increased by its young bees.—FRANK P. ADAMS in the Canadian Bee Journal.

Making Rock Candy for Feeding

The ordinary pulverized sugar in honey mixed into a stiff dough makes a very excellent bee-candy for cold-weather or spring feeding. But one objection to this kind of feed is that the granules will sometimes rattle down on the bottom-board, and be carried out and wasted. The candy that we prefer is made by mixing sugar and a little water and a little honey, and boiling long enough so when cold it will form a translucent block of rock candy. Do not stir, as that makes it somewhat mealy or grainy, and the result is the bees will cause the granules to drop down and so be wasted. The honey is necessary to prevent graining. It may be a little sticky, but it should be wrapped in paraffin paper, and then when ready for use the the paper should be peeled off on one side and the candy placed on top of the brood-frames. Our experience in giving *liquid* feed in cold weather is not favorable. We always use combs of sealed stores first; then, if we have not the combs, candy.—Gleanings in Bee Culture.

Contributed Special Articles

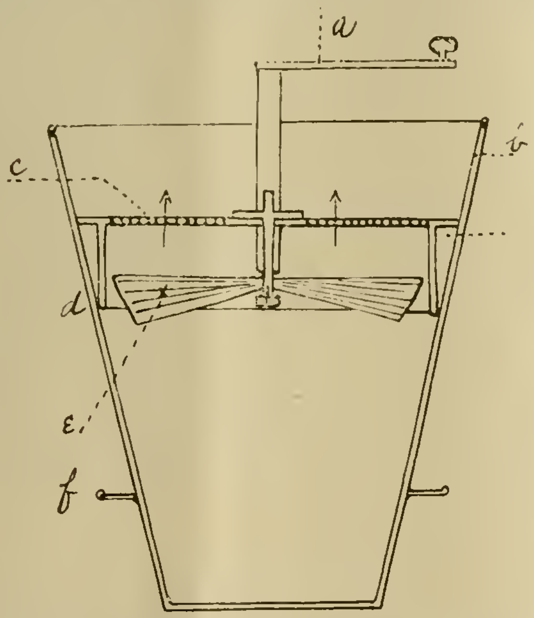
Kettle for Rendering Beeswax from Old Combs

BY C. P. DADANT

I FIND the following in L'Apiculteur for July, and as it appears to me to be very practical, I have concluded to translate it for the American Bee Journal:

At the last meeting of the Comtoise Association, one of the members, Mr. Beaux, of Chaillnz, presented in the name of Mr. Kuhn, manufacturer at Chaille, a kettle intended to extract entirely the beeswax from the old combs of the apiary.

The slumgum obtained by the melting in an ordinary kettle contains still a large enough proportion of beeswax to enable the apiarists to sell it to the beeswax bleachers, who, with the help of powerful methods which are impracticable to ordinary bee-keepers, manage still to extract quite a quantity of beeswax from the slumgum in question. The rendering of the wax in these cases has therefore not been thorough. The kettle of Messrs. Kuhn and Beaux washes entirely the remnants of broken combs, leaving in them no perceptible quantity of beeswax. The residue, after treatment by this method, may be considered as entirely cleaned out.



a—Removable crank. b—Level of the water. c—Screen for straining the liquid wax. d—Level of the combs. e—Wings of the wheel. f—Shoulders for supporting kettle on stove.

A mechanical disposition, simple and ingenious, and the use of a melting liquid of high temperature (water saturated with salt), permit reaching this much desired result. Let us examine the kettle.

1st. It is a receptacle of galvanized iron or tin, the shape of a circular wash-boiler, and supplied near its base with a projecting edge or collar which allows it to stand upright on any ordinary stove. Its capacity is about 5 gallons, which permits a woman to handle it easily.

2d. In this body is fitted a screened hoop, the center of which is perforated, and through which a shaft is placed, the latter at its bottom supplied with a winged wheel similar to those on windmills. The upper end of the shaft carries a crank which is removable at will.

We fill the kettle with old combs up to the level of the screen, and put on the inside the screen and the shaft with its winged wheel; then fit the crank on and fill the kettle to within 2 inches of the top with water. When heat is applied the wax melts and seeks to rise. But at the same time the pellicles, cocoons and cast-skins of the brood-combs ascend also, and close the holes of the screen. Then comes the work of the winged wheel by the use of the crank. At the time when the water begins to boil, we turn this crank every half minute at the rate of 40 to 60 revolutions per minute. The fan-shaped wings stir the mass of cocoons, beat it, break it to pieces, and, thanks to the windmill shape of the wings, push towards the bottom all the obstructing residue, thus permitting the lighter beeswax to come up through the screen and rise to the surface.

This process is entirely new, and has much pleased the members.

Another "trick" still improves the result. We all know that the hotter a body gets the more fluid it becomes, and the easier it becomes separated from the solid particles. Beeswax is subject to this rule. Although it is fusible at less than the temperature of boiling water, it becomes very fluid at 212 degrees, and is still more so at a higher temperature. It appears that a much higher temperature may be reached by using for rendering wax a solution of salt in water. Take a certain quantity of water and add salt until it can melt no more; that is, until undissolved salt remains at the bottom of the vessel in spite of all the stirring you may do. In this condition the solution has its boiling degree raised to 230 degrees, and this is a first advantage which permits the beeswax to become more fluid and to pass through more readily to reach the top. On the other hand, the salted water has become more dense. It is heavier than pure water, and this helps to raise the beeswax to the top more readily. This use of salt was mentioned by Dr. Miller, in February Gleanings, as mentioned in L'Apiculteur for April.

Thus stirring with the screw-shaped wheel, and use of a salt solution, are the two new and ingenious points of the invention of Messrs Kuhn and Beaux. This was not found at first trial, but has been the result of a series of experiments. The trials have been numerous, and at the beginning success was doubtful. After a quarter of an hour of stirring every half-minute, the work is done. We remove the kettle from the fire, remove the crank which would otherwise be caught in the cooling wax, and we cover the kettle to let it settle slowly. After 30 hours the cake of wax will come out readily. We take it out and wash it with clean water. All that will not brush off readily still contains some beeswax, and should be put aside to be remelted with the next batch. The residue remaining in the kettle contains no longer any beeswax. The separation of the wax from the residue has been complete, and the maximum of economical rendering of wax has been reached by a simple method which is within the reach of all.

The presentation of this kettle has been a prompt success. It is certain that with this rustic implement, easy to manage, and enabling one to remove all the wax from the combs, the average bee-keeper has great advantage in being able himself to render all his old combs. The kettle is also suitable for any kitchen stove, and the cost of fuel is practically eliminated.

Several orders were given at once by members of the Association. The price is within the reach of all, 15 francs at the factory. I have had the curiosity of inquiring into the prices of similar implements, and I was astonished to find that this small implement is exceedingly cheap when compared with others, and its acquisition will complete the outfit of many a small bee-keeper. No other system gives the advantages mentioned in connection with this.

The Association complimented Messrs Kuhn and Beaux on their discovery, and hoped that the "Comtoise Wax-Kettle" may become as popular as several other implements invented by some of its members. DR. SEXE,

President of the Comtoise Association.

I believe that the ideas expressed above are practical. The salt-in-water idea for rendering wax is developed here with a very good argument. I expect to try this implement myself, and report later. Hancock Co., Ill.

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Hive for Producing Extracted Honey

BY W. W. M'NEAL

I WANT to tell the readers of the American Bee Journal about a hive I have been using for the production of extracted honey. I have done a good deal of experimenting in hives in my own apiary, and, besides, I have had the advantages of comparing the different styles of hives in actual practice in large apiaries in other places. The one I have chosen as being the most suitable for the purpose here, and I dare say in many other sections of the country it will work just as well, I will describe as follows:

The hive is double walled, and takes 10 crosswise self-spacing frames in the brood-chamber. The inner bottom slopes to the front, which permits of the hive being set level on its stand, and keeps the floor dry, too. There is no packing of any kind between the walls, the hive merely being lined inside with lighter material. The frames are 11x16¼ inches, outside measure, and there is room for a follower at the back. This gives an entrance space fully 17 inches long, and as I make it ¾ of an inch high, it will readily be seen that there is abundant room or means for ventilation. I regulate the entrance in the ordinary way, by the use of entrance blocks.

Now, with this large entrance there is no need of prying the hive off the bottom-board, as is often done with hives having detachable bottoms. Bees need lots of air when they are storing honey, but to give it in this way is so much easier, so much more practical, that tall, narrow hives are not "in it" at all.

When you pry or wedge up a hive, such work must all be undone again at the close of the season. The bees fly out more or less along the sides, and often cluster there also. This makes it worse about bees getting into one's shoes while standing at the side of the hive. This is especially so if low-top shoes are worn. Then, when swarms issue the queen is liable to leave the hive by the side entrance, and get lost in the grass, if she is clipped. Give me the permanently large entrance, regulated with the blocks, every time.

Now this hive has a large base; it does not blow over easily, and, besides, affords large super accommodations.

I forgot to mention that it has a portico similar to the Langstroth hive.

The super takes 13 frames if ordinarily spaced, or 12 with a follower. I have used both a 6-inch and a 7-inch frame in the super for extracting, and both work admirably. For my own convenience I want nothing larger than a 7-inch frame for extracting purposes, but on 8 and 10 frame hives of the ordinary make it is better to use a deeper frame. There will be more honey harvested at less expense by using one deep super, taking the same size frame as those used in the brood-chamber, than in two shallow supers. A narrow, shallow super costs nearly as much as a standard-depth brood-chamber, and two of them require just double the amount of manipulation.

If one doesn't mind extracting from large frames, then there is no question about their superiority over shallow ones, in most places, for the production of extracted honey. When I say this I have in mind the Langstroth hive and frame. In my hive I get nearly as much super-room as there is in a 10-frame Langstroth brood-chamber, and have the pleasure of using a 7-inch frame.

There is a large telescope cover, ventilated, that fits down all over the super and rests on a rim about an inch below the the top edge of the brood-chamber. This affords a good deal of shade in summer, and keeps out all rain during the winter. When I wish to prepare the colony for winter, all that is necessary to do is to remove the frames from the super, spread a cloth over the honey-board which is left in place, fill the super full of dry forest leaves, and the job is done. I always leave the flat super-cover off during the winter, otherwise the packing would become wet in the super and destroy the colony.

This hive costs a little more at the start, but if you produce extracted honey, and live in a place where bees need a good, substantial hive, make some on that order and compare their utility with other makes of hives. Scioto Co., Ohio.

Convention Proceedings

Report of the Chicago-Northwestern Bee-Keepers' Convention, held at Chicago, Ill., Nov. 30 and Dec. 1, 1904

(Continued from page 569)

DETECTING ADULTERATION IN BEESWAX.

Pres. York—Have you the entire letter?

Mr. Abbott—I have the entire copy, my comment and the editor's upon it.

Dr. Miller—Just what is the statement he did make?

Mr. Abbott—The sentence states that honey is not adulterated, but that paraffin is used wholly or in part in the manufacture of foundation. Those are not exactly the words but that is the substance of it.

Dr. Miller—That leaves it, he might say if he knew of a single case in which some fool who was making experiments might have used only half a pound of it. Perhaps it will be wise for us to be careful in what we say, and rather ask the question whether Prof. Wiley has any proof; and perhaps it would be wise to let the journals ask him. I think that would be better.

Mr. Dadant—I think you are doing Mr. Wiley a great deal too much honor by paying so much attention to what he says. In regard to this accusation, it only strikes one or two firms. I am perfectly willing to stand on my own responsibility, and my respectability, without any attention being paid to it.

Mr. Dittmer—Mr. Dadant is wholly right. Prof. Wiley's reputation in the past has been such that he deserves no attention on our part, and the best way to get rid of an obnoxious person is to ignore him.

Mr. Abbott—Mr. Wiley is chief chemist of the United States; his word is authority not only in the United States but all over the world. He is quoted as the representative of the United States by the chemical men of the world and we cannot ignore Mr. Wiley. We have to face the fact that he represents the United States among the scholars of the world so far as chemistry is concerned, and he represents the United States so far as the people in command are concerned. We cannot ignore those things. It is all right enough to say we are giving him too much advertising. We are not giving him too much. The chief chemist of the United States, who speaks by authority of the United States, ought to tell the truth.

Mr. Dadant—But he doesn't. It will serve no purpose whatever to demand anything. A man who will state a thing which he knows to be false will stick to the falsehood. He will make an untruthful statement again, and it will simply make matters worse by having anything to do with him.

Mr. Hutchinson—Not only Mr. Dadant but all other comb-foundation manufacturers are affected if these statements go out in the Rural New Yorker all over to the reading community that buy honey; it prejudices them against our product.

Mr. Dadant—In that case, don't ask him to prove it but simply state that it is not so. If you ask him to prove it when he has made the statement he will prove it in some way if he has to manufacture something in order to prove it in one single instance. That will be sufficient for him, and sufficient to hurt your business that much more.

Mr. Colburn—I wanted to ask if anybody here knows whether bees will work on foundation that is made partially of paraffin?

Dr. Miller—Yes, they will.

Mr. Colburn—What proportion?

Dr. Miller—I don't know.

Mr. Wilcox—What causes the difference in foundation with regard to some being very hard and others very soft at the same temperature?

Mr. Dadant—Beeswax is a little like iron; you can cast iron and make it malleable, and it is the same way with beeswax. Pour beeswax into a mould and the cake will be brittle. It will break readily and you can't stretch it. But put that cake of beeswax under the roller and it will become malleable; that is, warm it to a certain temperature. There are a good many points concerning beeswax that it is impossible for the general public to know. In regard to the adulteration of beeswax with tallow, it may be well to inform you as to the way of detecting tallow. It is very easily detected; it makes the beeswax softer, and when you have a cake which you suspect of having tallow at the ordinary temperature, run your fingernail over the cake. If it is pure beeswax it will make ripples in the cake; if it is tallow it will make a dull-looking streak in the cake.

INCREASING THE CIRCULATION OF BEE-PAPERS.

Pres. York—Here is a question that I didn't ask myself, but I would like to know the answer. "What can be done to increase the circulation of bee-papers?"

Mr. Moore—Advertise.

Mr. Abbott—I do not think that that ought to be passed by. I am not saying that because I am interested in papers; I don't publish a bee-paper; I publish a farm paper. But it does seem to me that there is not enough pride among bee-keepers in our industry. I asked that question and I asked it because I wanted to say something. You take the poultry people, and there are in the United States something like 15 or 20 poultry papers that have a circulation ranging from 25,000 to 75,000. They all have good circulation, and every poultry keeper swears by his poultry paper. Every poultry keeper has a pride in his industry and therefore he reads carefully his poultry paper. They do not all take the same paper, of course, but they swear by some poultry paper, and they go out and talk it up amongst their friends, and they get subscribers for the different papers; they are talking it up at institutes and poultry meetings, and all the time interested in pushing the circulation of their papers. But it seems to be a crime to mention a bee-paper at any bee-convention. The editors are so modest they will hardly distribute sample copies for fear some one will say they are trying to drum up trade. If they are, they are drumming up trade that helps us. Take the American Bee Journal, the only weekly bee-paper that is published on this continent and it has a paltry circulation say of less than 10,000 copies, and perhaps there are less than 30,000, all told, that read bee-papers, and we are told, and we tell the world, that there are over 300,000 bee-keepers in the United States. Are there less than 30,000 out of 300,000 who have enough pride in the industry to spend one dollar a year to learn what is going on in the industry? It seems they must think it a very small business if it is not worth investing a dollar in. There is no other kind of an industry but what the people who belong to it are willing to take three or four different papers. The hog people, the sheep people, and the poultry people, take three or four papers. A man came into my place the other day who is just an ordinary poultry fancier in the city, and before he went out he had subscribed for four poultry papers in addition to mine. I said to my wife, "That fellow has some pride in his industry." If a man happens to take two or three bee-papers, and spends two or three dollars a year for bee-literature, he seems to think he is making a bank account for some fellow, that lives in the city. I can't understand how it is we have so little industrial pride in our papers. If the American Bee Journal, instead of having less than 10,000 had 100,000 subscribers, what a power it would be. Then when Mr. York opened his mouth in the American Bee Journal in regard to such a thing as we have just been discussing it would mean something, because he would have a constituency behind him, and he could make himself heard all over this land. I say, the way to do it is for the bee-keepers of the United States to take an interest in the circulation of our bee-papers. Mr. York, Mr. Root and Mr. Hutchinson will all be gone soon, their hair will soon be as grey as mine—mine is not very grey yet, but I am getting old, and I know it—and Dr. Miller there, and somebody must come into their places, and this industry is to be perpetuated and the bee-papers are what perpetuate it, and I say we ought to take more interest in it than we do, as individuals and bodies.

Dr. Miller—I must say a word in defence after such a lambasting as that. I very much doubt whether there is a larger percentage of poultry men take the poultry papers than the percentage of bee-men that take bee-papers. Did you tell us how many poultry subscribers there are and how many poultry keepers? Please remember this, that there are more people that keep hens than keep bees, very many more; there are more than five times as many.

Mr. Abbott—I am talking of the poultry fancier.

Dr. Miller—If you count the poultry fanciers and the bee-fanciers I think they will rate very fairly. I think the bee-fanciers take just as many papers as the poultry fanciers take poultry papers. But you must remember that the subscription list of these papers is not made up of fanciers so much as of those who keep a few hens or a few bees. My wife keeps hens and several other wives keep hens, and they don't keep bees at all. When you take the number, I do believe Mr. Abbott will find out he is a little hard on us. We are keeping up to the mark just as well as the chicken people are. The thing in a nutshell is, there are not so many bee-keepers as there are of the others, and I don't believe we are as "worse" as we might be.

Mr. Whitney—I agree somewhat with Mr. Abbott and with the Doctor. I think the Doctor's position is about correct when he makes a comparison between the chicken men and bee-keepers. But the fact is, we don't take the bee-papers as we ought to. I don't care how many chicken men take chicken papers, every mother's son of us ought to take a bee-paper. There is not a farmer in the country but ought to take an agricultural paper and a bee-paper and a fruit journal. They all raise fruit, they all raise poultry, and nearly all of them ought to keep a few colonies of bees; that is, keep them right, keep them as they should be kept. I have tried my best in the last year to increase the subscription list of the different bee-papers; I have succeeded in getting four or five individuals to subscribe, and they are delighted with what they get in the bee-papers. I think if we would all take that interest in it, that we go to somebody who is our neighbor—and some clever fellow would just as soon give a dollar for something he doesn't know anything about, may be he will learn something about it, and in that way we have increased the circulation of these different journals may be one hundred percent. I think we can do it next year, and if we do that, we will increase the membership of the National Association, too.

Mr. Dadant—I wish to take issue with Mr. Abbott in the statement that there is a greater percentage of poultry raisers who take poultry papers than there are bee-keepers who take bee-papers. I believe it is the other way. I think you all know everybody keeps poultry, except a few people in the big cities. Every farmer keeps chickens. We see the chickens when we pass by the farm-house; and lots of city people keep poultry. Now, what per cent are there of those people who keep bees? How many are there of the people who keep poultry who read a poultry paper? Only here and there. But of those who keep bees the great majority, who have an interest at all I believe, take a bee-paper. There are plenty who raise two hundred chickens a year and who make money out of them who do not take a poultry paper. But there are very few farmers that we find who make any money at all out of bees that do not take a bee-paper. Therefore, I believe, generally, the bee-keepers take a journal where the poultry men do not take a poultry paper.

Mr. Whitney—I know a bee-supply man who has a large sign out by the side of the railroad advertising bee-keeper's supplies and honey, and he doesn't take a journal, and I have talked to him more than a little to get him to subscribe for some of the journals.

Dr. Miller—I would like to ask those bee-keepers who take only one bee-paper to rise. (7 rose.) How many take only two? (2.) How many take only three? (16.) How man take only four? (5.) How many take more than four? (6.) I am very glad to have the opportunity of asking those questions. I want to follow the advice of Mr. Abbott, and urge that those who do not take a bee-paper, that did not rise, to take a bee-paper. You will like it; it will do you good.

Pres. York—I would like to ask Mr. France to say what he found in Wisconsin, where he had made a pretty thorough canvass of bee-keepers, as to the proportion of them that take a bee-paper.

Mr. France—A few years ago, I don't remember the year, I was going to make a very thorough report while inspecting bees over the State. I believe Wisconsin will average up to any other State as a honey-producing State; it will average as well in its proportion of those who are readers of bee-papers. When I had finished that season, I am sorry to say I found only one in twenty who was a reader of the bee-papers. That looks pretty tough for my own State, but I believe if you take the subscription lists you will find it will average up with the other States. It is just the same with the farmers' institute. Wherever the farmers' institutes were frequently held we found better farmers; and invariably wherever I find a home that takes a bee-paper I find a better bee-keeper.

Mr. Abbott—I want to say further, I know scores of people who have from 10 to 15, 20 to 100 colonies, who do not take any bee-paper at all. I have a way of finding out because I am taking subscriptions on the basis of new subscribers only for the American Bee Journal, and you would be surprised to know the information that comes to me along that line. People come to me and say, "I want to take that club offer of yours;" and I say, "Why, you can't take that; you get the American Bee Journal right along; that is for *new* subscribers." They say, "No, I don't. I don't take it at all." Some of them say they never have taken it; and some of them say, "I never have heard of it; what kind of a paper is it?" And they don't all live in Missouri, either. [Laughter.]

(Continued next week.)

Why Not send in some new subscriptions for the American Bee Journal? Samples free for the asking.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

White Clover and Cool, Wet Weather

In this locality, as in many others, white clover is doing a wholesale business at growing and blooming. Plenty of nectar in the bloom, too. But cool and wet weather has not allowed the bees full chance at it. Yet there may not be so much loss in that, for cool, wet days may prolong the growth and the blooming enough to make up all loss. Good weather or bad, the bees have done a lot of storing. Yet July 20, while the fields are still white, and apparently the bees are hard at work, robber-bees are beginning to trouble. There doesn't seem to be any plain reason for it. Most likely, however, it is only temporary. Other years there have been days when the harvest seemed about to close, and then the bees would take fresh hold again and do good work. Their finished work would show evidences of these breaks in the harvest. A section would show that they had begun rounding it off, sealing up without drawing out to their fullest extent the outer cells, some of the outermost cells still remaining unsealed, then, as if by an afterthought, these outermost cells would be drawn out to their fullest extent, the afterthought showing very plainly in the finished section.

Honey in the Heart of London

Over 50 pounds of comb honey of excellent quality have recently been gathered in the very heart of London. The bees belonged to a woman apiarist.—Farmers' Review.

So-Called Poisonous Honey

Dear Miss Wilson:—I would like to ask a question which bothers me. Can honey be poisonous without poisoning the bees? The reason I ask is this: While I was uncapping some honey some was so green in the comb that when taken out there was a slight tint of green. New Jersey.

Yes, there is such a thing as bees gathering honey that does not injure them, and yet is poisonous to the human family—at least the honey sickens the people that eat it. Such cases, however, are rare, and it is not likely you will ever be troubled in that way. There is the well-known story of soldiers—was it Xenophon's army?—being thrown out of action by eating honey gathered perhaps from mountain laurel. Some say honey from laurel is poisonous, while others who live where laurel is abundant say they never have any poisonous honey. Down South honey from yellow jasmine has a bad name.

Don't be alarmed at the slight tint of green in honey. Some very good honey has that; doesn't alsike or sweet clover honey?

How Many Supers to the Hive?

What a difference in practice there is as to the number of supers on a hive at the same time. Now and then some one—generally a beginner in the first year—talks as if only 1 super at a time were to be used. Indeed there is—at least there has been—such a thing as a closed-top section; and with closed tops how could more than one super at a time be used? I wish some one who uses these closed-top sections, or indeed uses only 1 super at a time, whether the tops be closed or open, would tell us all about how it works.

Then there are those—experienced bee-keepers, too—who advocate having only 2 supers at a time. It must be that their supers hold more than usual, or that their colonies are smaller than they are in this locality. Some of our colonies would certainly be crowded out of the hives if the attempt were made to confine them to an 8-frame hive and 2 supers of 24 sections each. The bees simply couldn't all get in.

Some of the 2-super folks would probably raise their hands in horror if this third week in July they should see the supers piled up on our hives. Possibly 2 or 3 colonies have only 1 super each. That's because something has gone wrong with the colony, and it isn't counted as amounting to anything. A very few have only 2, and these are counted little more than failures. The season, however, is good, or these might not have even the 1 or 2. Most colonies, however, have more than 3 supers each. Quite a number have 5, and a few have 6 supers each.

Of course it is possible some colonies have more super-room than they need, but it does less harm to give too much than too little room.

Very Small Honey Crop

Our honey crop here so far is very small. It was too wet while the clover bloomed, and when the basswood opened we had 3 or 4 days of hot weather, and then 3 days of cold winds, so that bees could not fly, or could not fly enough to do anything. They work on sweet clover now, but there is not plenty of it. Goldenrod will soon bloom so they still have a show, although there has been no show for honey all summer—except a few hours at a time. I received a card from Faribault, Minn., and it says that the honey crop so far is short there. (Miss) Mary Theilmann.

Wabasha Co., Minn., Aug. 3.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to Dr. C. C. Miller, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Plan for Wintering Bees

1. I am making some boxes to put over the hives to winter the bees, and want them water-tight. Would it be all right to cover the boxes with tar-paper, or would the tar odor be offensive to the bees?

2. Shall I close the entrance entirely during winter, or only part? What size opening should I leave? Illinois.

Answers.—1. The tar-paper on the outside will not trouble the bees.

2. By no means close the entrance entirely. Leave an opening equivalent to 1 to 3 square inches, according to the strength of the colony.

"Lining" Bees in the Woods

How can I line bees out in the woods? Wisconsin.

Answer.—Set your bait and watch the direction the bees go when they leave it. Then move your bait in that direction, and try again. Keep on till you find that the bees go back in the opposite direction, and then you'll know you've passed the right place, and you can bait back nearer to it, all the while keeping a close watch on the trees to see or hear the bees flying in or out. Another way is to cross-line. After watching the direction the bees take, instead of moving directly in that line, move at right angles to it and watch the line the bees make. Now guess about where the point would be where these two lines cross, and try accordingly.

Meaning of Queen Terms

1. In queen-bee advertisements what is the meaning of untested, warranted tested, tested, select tested, and breeders?

2. Have the untested queens sent as premiums been mated? Washington.

Answers.—1. As used with regard to Italian queens, these terms have been in use as follows: An "untested" queen is one reared from an Italian mother, and has begun to lay, but it has not yet been determined what her progeny will be, so it is not known whether she has mated with an Italian or a black drone.

A "tested" queen is one which has been laying more than 3 weeks, and whose worker progeny show the 3 yellow bands.

A "warranted" queen is one whose progeny has not yet been seen, but is sent out with the agreement that if such progeny does not show the 3 yellow bands it will be replaced with another queen purely mated.

A "select tested" queen is one which in some respects seems better than the average.

A "breeder" is one supposed to be of such good stock and good characteristics as to be superior to others to breed from.

It may be added that these things refer largely to color, and a good many care less for color than performance.

2. When a queen is sent out by any one, it is always understood that she has been mated, unless it is specially stipulated that she is to be a virgin.

Miller Frame—Split Sections—Foundation Splints—Spacing in Hives

1. In the Miller frame, what objections would there be, if any, to halving all bars as well as the bottom-bar, placing foundation over one-half, then nailing together?

2. Could sections be made in the half form, vertically, and a full sheet of foundation laid between the halves, then fastened some way?

3. Why do your splints not extend from top-bar to bottom-bar? On page 88 of "Forty Years Among the Bees," you say "¼ inch shorter than the inside depth of frame."

4. Such light sticks as your splints are liable to twist or warp and make foundation wavy. Do you often find them not exactly straight just before using, and discard them? I suppose after being boiled in wax they would no longer warp.

5. It is complained that side-spacers, nails or staples are objectionable for several reasons, and that an indented rabbet is objectionable because the frames will not slide on it. Could the bottom spacing be accomplished by driving headless ("finishing") nails into the *hive-ends* so they would strike the bottom-bars in the middle, ⅛ inch from the bottom? To lift frames this small distance, several at once, and slide them on metal rabbets at the top would seem reasonably easy, a slight inclination of the frame being all that would be necessary. To secure top-spacing, why could not an indented metal spacer be used? One could be laid on each end of the frames, the two thus keeping the frames regular in distance. A notched strip of heavy tin, similar to the notched stick used for fastening frames for shipment (page 223, "A B C of Bee Culture"), would constitute the spacer. If the

hive is to remain on the stand, these 2 top-spacers could be removed before closing the hive, merely being used for a moment to see that the frames have been accurately spaced. If the hive is to be carried a few feet to another stand, the spacers could be left in until the hive is settled. The tin strip would simply be bent down, for the spaces between the frames and the intervening parts be at right angles so as to be flat and rest on the frame top-bars.

Of course, for out-apiaries and removals to the cellar, etc., different and more permanent fixtures would be necessary. What I am trying to get is a frame with all bars of identical width and no projections, automatically spaced, and with practically no propolis attachments. I am using closed-end frames, but I long for a hive where I can take out any particular frame without touching any other frame or springs, or other piece of hive furniture. Can my plan secure this? INDIANA.

ANSWERS.—1. I don't know that there would be any objection except the extra trouble and the difficulty of having all the parts accurately fitted together. But I don't think there would be any advantage in it. It is barely possible that you may be thinking that if all parts of the frame were halved there would be no need of any kind of support to keep foundation from sagging, but unless you use foundation expensively heavy there will certainly be need of splints or wires.

2. Yes, such sections have been used to a considerable extent in England. One objection is that the finished section does not present so good an appearance, the foundation showing through the upper surface of the top-bar, and also through the side-bars.

3. Merely for convenience in putting in the splints. If the splints filled the whole space from top-bar to bottom-bar, it would take a good deal more time to put them in. And it would make no better work.

4. No, I have no recollection of ever discarding a splint because it was not straight. Neither do I remember seeing a splint that was warped or twisted, either before or after being boiled in wax. I think that a splint no thicker than 1-16, even if warped or twisted, would be straightened out when pressed in the foundation.

5. Spacing, such as you mention at the top, has been in use, and bottom-spacing has also been used, but such spacing has not found very general acceptance. Without actually trying it, I should not expect your bottom-spacing with nails to work very easily. You would have to lift the frames at least an eighth of an inch, and that would take away all the slide at the top, and then it would be some trouble to settle them at the right place at the bottom. What is wanted often, is to have one frame, or all the frames in the hive, to slide as far as wanted with one shove. On the other hand, I am pretty sure that your spacing would not have to be changed in the least to move hives in or out of the cellar, or to haul to an out-apiary.

But remember that I don't know anything about the whole affair any more than you do, and the trial of one hive would settle the question for you more than a year's guessing on my part. You see I'm not as good a guesser as I might be, for I guessed you would try to coax along a queenless colony in the spring rather than to reduce the number of hives with bees in by uniting, and you went and did just the thing I guessed you wouldn't do. Nevertheless, I'm going to venture another guess. You say, "I long for a hive where I can take out any particular frame without touching any other frame, or springs, or other piece of hive furniture." You can easily have a hive that will allow that so long as no combs are built in the frames, but I venture the guess that when you get combs built in the frame, they'll never be so true and straight that you can take hold of any one of them and lift it straight up without interfering with one of its next neighbors. When you do I'm ready to apologize for my skeptical guess.

Feeding Pollen-Gathering Bees—Producing Beeswax

1. Do bees need to be fed if they are gathering pollen every day, and nearly all day some days, although they have not the least sign of honey in the hives?

2. Will bees make nothing but wax if the combs are taken out every day during a honey-flow? I am so informed by a bee-keeper. If he is right, what becomes of the nectar which they are bound to gather? He says they convert that into wax also. I am much interested in this matter, for wax should be our main object here in Cuba, as our honey market is ruined. CUBA.

ANSWERS.—1. When bees are carrying in pollen they are generally, if not always, carrying in at least a little honey. They would hardly live without gathering any. If none can be seen in the hives, it is because they use it up for their daily needs, and although they may get along in that hand-to-mouth manner, it would be better to feed so that at least a small amount of stores should be in sight in the hives.

2. You will hardly make a brilliant success of wax-production by taking out the combs daily; that is, if you should take out all combs. There must be plenty of comb left at least for brood-rearing. Success in producing wax has been reported by taking out the combs every few days and feeding back the honey. Bees will construct comb only so fast as they have something to put in it, and your informant is not so far out of the way when he says that wax will be made of the nectar they gather if they have no comb in which to store it.

Queen-Rearing—Is Natural Bee-Pasturage Diminishing?

1. Can queen-rearing be made a *profitable* pursuit in a locality where the honey-yield is not sufficient to warrant one to run an apiary for surplus honey?

2. Is the inevitable diminishing of *natural* pasturage for bees, which is gradually taking place, calculated to affect seriously the industry in this country? I am told that localities which 20 years ago would abundantly support 100 colonies, will *now* barely support 20. GEORGIA.

ANSWERS.—1. I have some doubt about it. To be sure, feeding can take the place of natural harvests, but queen-breeders generally find it uphill business to get on when the flowers are not in good working order.

2. If there is an inevitable diminishing of natural pasturage, it must certainly have its effect upon the industry. But you will pardon me if I say that I am very skeptical about any such diminishing. There may be localities where only a fifth as many colonies can be supported as 20 years ago, but take the country at large, and I believe there's as much nectar secreted as there was 20 years ago.

Queenless Colony—Swarming—Uniting a Swarm with a Colony

1. I have one colony of bees which I think has lost its queen, but I am not sure of it. I looked all through the hive and could not find her. The bees worked hard after I first hived them, but are not working so well now. Do you suppose the queen is dead?

2. Will these bees construct queen-cells and rear another queen?

3. A colony cast a swarm 3 or 4 weeks ago and it has not swarmed since. What do you suppose is the trouble?

4. Would it be all right to put a new swarm in with a weak colony and thus make a strong one out of it? IOWA.

ANSWERS.—1. I'm afraid they have no queen.

2. Yes, if you give them a frame of eggs and young brood they will be pretty sure to rear a young queen. But it will expedite matters very much if you give them a frame from a colony that has swarmed, said frame having on it a sealed queen-cell. It will be likely, too, to be a better queen.

3. You probably have an idea that every colony that swarms should send out one or more afterswarms. That is by no means always the case Many a colony is satisfied to send out a prime swarm without thinking of swarming again. And most bee-keepers would be thankful if there was no such thing as an afterswarm.

4. Yes; but in thus uniting, the 2 queens should be both laying queens, or both virgin queens. If one has a laying queen and the other a virgin, they are likely to fight.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses,
By E. E. HASTY, Sta. B. Rural, Toledo, Ohio.

SECTION WITH TOP AND BOTTOM STARTERS.

On page 456, that picture of a section with the top pieces of foundation in it is very admirable in its distinctness. We can see that the two pieces of foundation are of two different kinds, one with side walls much better developed than the other. The picture is praiseworthy from two different directions—a beautiful example of distinctness as a picture, for one thing, also a most excellent way to show the uninitiated just how the thing is done.

AMOUNT OF COMB SURFACE TO BE SEALED BEFORE EXTRACTING.

As to what proportion of comb surface should be sealed before extracting, 6 of the 29 experts do not give direct answers. I am delighted to see that a majority of those who do (13 out of 23) say it should be all sealed, or nearly all—and Doolittle puts in the "tiger" by saying to let it ripen two weeks *after* it is all sealed. Good! If practice now could only be as excellent as precept! As to the minority, six name $\frac{3}{4}$ to only two for $\frac{2}{3}$, one $\frac{1}{2}$ and one $\frac{1}{3}$. One-third used to be the leading precept, and now it only gets one vote. Page 456.

BALDRIDGE FOUL BROOD TREATMENT.

The Baldridge plan of treating foul brood by depleting the old colony to nothing, and building up in its place a new and healthy colony looks very well on paper. All it lacks is use sufficiently long and broad to show that it actually works according to program always. If it does fail you have increased not exactly the number of your diseased colonies, but the number of your diseased combs. The general success of this attractive method is greatly to be hoped for. Page 469.

HOW BEES MEASURE ANGLES.

Never thought of it before till Mr. Doolittle told me! Each bee carries antennæ bevel-squares to measure distances and verify angles. Now, maybe that is the way they get their angles and diameters so nearly uniform. While making the first raise of the outer wall of a cell, they can gently keep touching the inner wall which is already up a bit. But those who have observatory hives and sharp eyesight must verify it that they actually do that—lest we be like that great professor (reputed the greatest in America), who gave it out that bees stood in their cells and built them up around them! Page 471.

WOULD SAVE THE EMPTY HONEY-BARRELS.

Our editor read a good paper to the Minnesota folks about keeping the grocers supplied —but I must get one arrow into it. Destroying a tight barrel to get the honey out of it is one of the barbarisms of the past which it is a reproach to our inventive good sense to have continue a minute longer. No patriotic person, remembering how near exhaustion our country's wood-supplies are, can look at such crazy waste with placid feelings. I'll guess that the winning way will be a loop of slender steam pipe thrust through a big bunghole—next shake it a good plenty—next turn out into a tank and finish the process there. The value of such a barrel as honey ought to be trusted in, would more than pay a laborer for a day's work getting the honey out. Page 472.

THE HIGH PRICE OF SECTIONS.

Mr. Bevins is puzzled at my seeming so indifferent to the high price of sections. I wrote (in a private letter) just as I felt. Presumably I felt that way partly from willingness to see good people make a good profit—as long as they refrain from making hogs of themselves altogether. Moreover, I felt that the cost of suitable wood would soon be up to the five-dollar-a-thousand mark, if it isn't now. Not wise to do kicking (mostly in vain) about so short a period of overcharge. I'll bend a little, however—can say that I don't at all admire selling No. 2 sections as No. 1. Perfectly white and clear material will have to be high while material that will make No. 2's holds out yet. Page 473.

Reports and Experiences

Bees Doing Well

I have 9 colonies. On June 15 they were all doing super work. On July 5 three of them began on their fourth super, having stored 72 pounds each. J. R. CHRISTIE.

Miami Co., Kans., July 8.

Hot Weather Burns the Clover

The bees in this locality stored several pounds of surplus honey as long as it lasted, which was about 2 weeks in June and the first part of July. Then hot weather set in and burned the white clover and basswood brown, leaving the bees in a condition to do nothing. They hang about the hives as if they were half asleep. To-day we had some rain, but it didn't last long, though it helps the bees. They were working on mustard right after the rain. The average will be about 75 pounds per colony.

B. F. SCHMIDT.

Clayton Co., Iowa, Aug. 2.

Fine Crop of Honey

We had a fine crop of honey here. I have up to date about 2500 pounds of as fine honey as I ever produced, and have increased to 200 colonies of bees. There is prospect of a good fall flow. Everything seems to be favorable.

Madison Co., Ill., July 17. L. WERNER.

Bees Doing Fairly Well

The bees are doing fairly well, but it has been too wet in this locality. I am taking off some fine honey to-day. F. MCBRIDE.

Hardin Co., Ohio, July 28.

Inspecting Apiaries

The State Inspector of Apiaries, Mr. J. Q. Smith, visited some of us recently by invitation. He first called on Mr. J. E. Johnson, president of the Western Illinois Bee-Keepers' Association, who has an apiary of 56 colonies in the south part of Knox county. His bees were found in good condition. When he overhauled my apiary of 16 colonies he found 8 diseased. He pulled off his coat, slid into a pair of overalls, and went to work. We put foundation into nearly 100 brood-frames, the bees of the 8 colonies into new hives, and the hives which had contained the diseased bees aside for the rendering tank.

I spent 3 days with Mr. Smith, visiting and caring for apiaries in this vicinity, and would recommend any of our members who have diseased bees to call upon him. He is thorough in his work, and has practical knowledge of the various diseases of bees.

ALVAH REYNOLDS.

Knox Co., Ill., July 17.

"Culver's Physic" a Honey-Plant

I am sending a blossom of what I would call a weed, but I tell you it is a good one, and I find the bees working on every blossom. What is it?

I have just 100 colonies with my increase and they are doing very well.

C. M. LAURENCE.

Black Hawk Co., Iowa, July 20.

[The weed to which you refer is Leptandra Virginica, or Culver's physic, but if you find it more useful than useless, it might be well to call it simply a plant rather than a weed. Of course, weeds are plants, but plants that keep their place, and are orderly and valuable directly or indirectly to man, should not be called weeds.—C. L. WALTON].

Heavy Loss in Wintering

I put 35 colonies of bees into winter quarters last fall, and there was not one living bee in the 35 hives when I took them out, so I had to start anew, and was quite discouraged. I bought 3 colonies, which came on the train, and as they were being loaded on the car some of the bees got out, and the men who were handling them threw the hive down. I lost one colony in this way. I sent for 2 more to Ontario, and when they came both queens were dead. I hope I will have better luck another year. HENRY SWAIN.

York Co., N. B., July 29.

About Half a Honey Crop

There is about half a honey crop here in southern Iowa. Two weeks of rain did it. Bees ceased gathering June 27.

A. B. TACKABERRY.

Van Buren Co., Iowa, Aug. 2.

The Great Value of Honey

I am very much interested in bees, having started with 11 colonies. I have discovered that honey is very healthful, so much nourishment is to be derived from eating it. In our home it is a remedy for all ills. To use it is to know its true value. A. MCCONKEY.

Lyon Co., Iowa, July 31.

Not a Good Honey-Flow

The honey season is over for the present. We have not had a very good flow. I have 3 bee-yards located in a valley running not quite north and south. The home bee-yard did the poorest; my next yard about 5 miles north did the best; the other one about 12 miles north comes next. It would seem that the latter has the best chance, as it has a more extended territory, while the other two yards are wedged in between the hills.

I may not have much more than a ton of white comb honey and 1000 pounds of extracted, from 160 colonies, spring count. I increased but little.

We expect some buckwheat honey, particularly in the yard that has already done the best. F. GREINER.

Ontario Co., N. Y., July 31.

Good Bee Country—Hot Weather

I live 20 miles from a railroad, in the hills, and have about 10,000 acres of farming land, all in grain and cattle ranches. Our town has only two families, but we have a post-office. The Valley is stocked with heavy oak timber, and so are the hills, and one does not need to go very far to find a bee-tree in a 200-acre patch. I have found 11 of them.

Last spring I had 26 colonies of bees, but did not have enough extra hives on hand for swarms that might issue, so I made boxes and sent to San Francisco for the fixtures. After 4 months the goods came. During that time I lost more than half of my bees. The very day the supplies came I lost a big swarm with the queen which I received from the American Bee Journal last year, and shortly afterward I lost the rest. I saved only 6 out of the whole apiary. By the first of April swarming was all over.

I increased to 48 colonies, and from one colony took 4 supers of the nicest and whitest honey I ever saw, and it has 2 supers on yet.

July 4th was exceedingly hot in this locality. The thermometer was 115 degrees in my house; at different places in the Valley 2 miles from my home it was 120 degrees, and 5 miles below it was 122 degrees. I heard that some places in the San Joaquin Valley it was as high as 138 degrees, dogs went mad and had to be killed, and men became insane and jumped out of windows. The combs in hives with brood and sections full of honey melted down to the bottom, drowning everything. I lost at least $50 worth of bees and honey. I raised all the covers during this hot weather, and had shade-boards on all the hives.

This is a good bee-country, and I would like to make a business of bee-keeping. But I am alone, have poultry besides, and have to do my own cooking and housekeeping, so I am afraid I shall not make a success of it.

BERNHARD SCHNUCHEL.

Monterey Co., Calif., July 13.

Different Races of Bees

In speaking of races of bees, the different authorities on bee-keeping do not give a description sufficiently definite to enable those unacquainted with the different races to distinguish one from the other, except perhaps the 3-banded light and dark, and the golden or 5-banded, Italians. I wish some one would describe the Caucasian, the Cyprian, the Carniolan and the Holy Land bees, giving size, color, and general appearance.

Just now all these different bees are being advertised for sale, and very many bee-keepers know nothing about them. I have been acquainted with the different colored Italians and the Egyptians, but the other varieties named I have never seen, nor read nor heard a clear description of, by any of the authorities on bees. DR. G. BOHRER.

Rice Co., Kans., July 31.

Very Short Honey Crop

As far as I can learn the crop so far is short—very short. We had a very unusual cold and wet spring. May 29 bees were starving. They have been very slow to breed up since then, and were not in good condition for the first honey-flow, which is just past. We will hope the next crop will be a great deal better. I am running for extracted honey, although nearly all other bee-keepers are producing comb honey. J. T. HAMMERSMARK.

Washoe Co., Nev., July 31.

Second Hand... **Comb Foundation Mills**

Honey Glassware

We have for sale a 6-inch and a 10-inch Second-Hand Comb Foundation Mill. Used scarcely any; good as new. If interested write for prices.

¾-lb. and 1-lb. Octagon **Tip-Top Glass Honey-Jars.** Prices: ¾-pounds, $4.50 a gross; 3 gross for $13. 1-lb., 1 gross, $5.25; 3 gross for $14.50. Address,

YORK HONEY AND BEE SUPPLY CO.
(Not incorporated)
141 Ontario Street, - CHICAGO, ILL.

Please mention Bee Journal when writing.

Please mention Bee Journal when writing Advertisers.

THE DEMAND FOR

Moore's Strain of Italians

Is greater this season than ever. Why? Because his **FAMOUS LONG-TONGUED RED-CLOVER STOCK** has won a world-wide reputation for honey-gathering, hardiness, and gentleness. They were working so thick on a field of red clover at haying-time that the man who cut it was afraid to drive his horses into it to mow it. Their long tongues enable them to secure nectar beyond the reach of short-tongued bees.

Untested Queens, 75c each; six, $4; dozen, $7.50. Select Untested, $1 each; six, $5; dozen, $9. Safe arrival and satisfaction guaranteed. Descriptive circular free.

Address, J. P. MOORE, Rt. 1, Morgan, Pendleton Co., Ky.

P. S.—I am now filling orders BY RETURN MAIL. 29Dtf

Please mention Bee Journal when writing.

Send for Our 1904 Catalog and Price-List.

OUR HIVES AND SECTIONS

Are Perfect in Workmanship and Material.

By sending in your order NOW, you will SAVE MONEY, and secure prompt shipment.

PAGE & LYON MFG. CO., New London, Wis. U.S.A

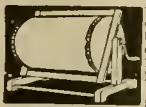
CONVENTION NOTICES.

National.—The International Fair is to be held in San Antonio, Tex., Oct. 21 to Nov. 1. When this Fair is in progress there are very low rates in force on the railroads out for 600 or 700 miles. Then there are harvest excursions from the North on the 2d and 4th Tuesdays of the month. The 4th Tuesday in October comes on the 24th. Considering these facts, it has been decided to select Saturday, Oct. 28, as bee-keepers' day-at the Fair. This will give ample time for members from the North to reach the city by starting the 24th. The regular sessions of the convention will begin Monday, Oct. 30, *and continue three days.*

The headquarters of the National Association will be at the Bexar Hotel (pronounced Baer, long sound of a), corner of Houston and Jefferson Sts., and rates are only $1.00 a day, and up. The convention will be held at Elks' Hall, 125 W. Commerce St., only two blocks from the Bexar Hotel.

Flint, Mich. W. Z. HUTCHINSON, *Sec.*

Missouri.—The Missouri State Bee-Keepers' Association will meet in Sedalia, Aug. 22 and 23, opening session to be at 2:30 p.m., Aug. 22. The room to meet in will be named later on. The State Fair meeting there at the same time will obtain low railroad rates from all parts of the State. The Livestock Association also meeting there on the 24th will give us some inspiration. Hon. Geo. B. Ellis, Secretary of the Agricultural department, will be there and give a talk and lend a helping hand. Louis A. Osborn, of that place, has kindly offered to act as host, and will direct to the place of meeting and to accommodation. Hotel accommodations can be had at $1 to $2 a day. Private boarding cheaper. Let us turn out en masse and have a glorious time as well as to effect some extraordinary progress. W. T. CARY, Sec.



DON'T BE BOTHERED

with lice on poultry. Schild's Lightning Lice Killing Machine instantly removes them from tiniest chick or fat gobbler. 3 sizes. Also Poultry Bits, Lice Murder, Lightning Lice Killing Powder, etc. Catalog free.

CHARLES SCHILD CO.,
8 Frankfort St. Cleveland, O.

Please mention Bee Journal when writing.

87½ Percent Saved

In mortality to those insured in the

TOTAL ABSTINENCE DEPARTMENT

OF

Security Mutual Life Insurance Company

EACH POLICY HOLDER is entitled to a Bond issued by the National Total Abstinence League.

YOU may hold a policy and BOND.

General and special agents wanted. Address,

3D28t A. S. RENNIE, Mgr., 614 Marquette Bldg., Chicago, Ill.

Dittmer's Foundation is the Best.

Send for Catalog, Samples and Discounts, and judge for yourself. 1904 output, 50 percent increase over 1903.

Full line of SUPPLIES, wholesale and retail.

Working Wax into Foundation for Cash a Specialty.
E. GRAINGER & Co., Toronto, Ont., Sole Agents in Canada for Dittmer's Foundation.

GUS DITTMER, Augusta, Wis.

Please mention Bee Journal when writing.

Capital City Apiary!

Fine Italian Queens

Untested, after June 15, 75c; Tested, $1.00; Breeders—the very best, $5.00. Terms cash with order. Safe arrival and satisfaction guaranteed. WALTER S. HOSS, 1123 Blaine Ave., INDIANAPOLIS, IND.

27Atf Please mention the Bee Journal.

A Famous Breed—Holstein-Friesian

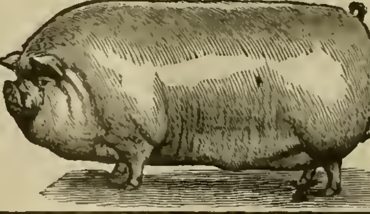
Holsteins will average 1000 to 1200 pounds of butter a year. They are an excellent breed for dairymen and cheese makers. Realizing the popularity and value of these cattle *Blooded Stock*—that hustling stock paper—will give up its August issue to Holsteins.

Blooded Stock

for August will contain a complete history of this breed; telling of their Dutch origin; their value as milkers, butter producers, cheese makers, etc. W. J. Gillett heads the list of contributors.

The September number will be devoted to Yorkshire hogs. Subscribe now! 25c a year. Anybody can afford 25c.

Blooded Stock, Box 221, Oxford, Pa.



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BINGHAM
Original
Direct Draft
CLEAN
Bee Smokers

4 Largest Sizes Soot Burning

Never Go Out
And last from 5 to 21 years

Pat'd 1878, '82, '92 & 1903

Tin 4-in. Smoke Engine $1.50. 3½-inch $1.10. 3-inch $1.00. 2½-inch 90c. 2-inch Wonder 65c—per mail.

Sent on receipt of price per mail.

T. F. BINGHAM, Farwell, Mich.

OTISVILLE, PA., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. FRED FODNER.

Please mention Bee Journal when writing.

Please Mention Bee Journal when writing advertisers.

DOOLITTLE'S

Partner telling his best girl about the fine

Italian Queens

in their apiary. Don't order a queen till you get one of their circulars.

CHOICE BREEDERS
Now being sent out.

DOOLITTLE & CLARK,
11Dtf **Borodino, Onondaga Co., N. Y.**
Please mention Bee Journal when writing

Shipping-Cases PLENTY FOR ALL

Made of Michigan white pine; 24-lb., $13; 12-lb., $8; 20-lb. Danzy, $11 per 100; less than 100 lots, ½c more each; 3-in. glass, 1c each more; No. 1 Sections, $4; No. 2, $3.50 per 1000. All kinds of Supplies kept in stock. Send for list. **W. D. SOPER.**
Rural Route 3, **JACKSON, MICH.**
27Dtf Please mention the Bee Journal.

40-Page Catalog Free!

Full information regarding all kinds of BEE-KEEPERS' SUPPLIES. Best goods. Latest improvements. Danzenbaker Hives and Fixtures. Prompt shipments. JOHN NEBEL & SON SUPPLY CO., High Hill, Mo, 3Dtf

ITALIAN QUEENS

	1	3	6
Untested	65c	$1.75	$3.00
Tested	90c	2.40	4.50

Safe arrival guaranteed.

JOHN LEININGER, Ft. Jennings, Ohio
29Dtf Please mention the Bee Journal.

WANTED

500 Colonies of Bees to run on shares in Southwest Texas—that great honey country. Personal attention. **H. H. HYDE**
31D2t 111 Fourth St., SAN ANTONIO, TEX.

Select Tested Breeders

Golden Yellow Breeding Queens, $1. Every young queen from them yellow as gold. Non-swarming, non-stingers and hustlers for honey. 8-page leaflet on Queen-Rearing free to all.

HENRY ALLEY, Wenham, Mass.

Queens—ITALIAN—Queens

BY RETURN MAIL

Queens from Root's Red Clover Stock and Golden Italian Queens—the best honey gatherers in America. Untested, 50c each, or $6 per dozen. I guarantee safe delivery. Send your orders to

E. A. SIMMONS, Fort Deposit, Ala.
33Atf Please mention the Bee Journal.

WANTED

A man and wife (no children) to take charge of a small country home. Must be a good gardener, who also understands bees, poultry, cows and horses. A good place and home for the right kind of people. Address or call on,

C. E. HERRICK,
Room 635 Rialto Bldg., Chicago, Ill.

Please mention Bee Journal when writing advertisers.

Tennessee Queens

Owing to the great demand for my TENNESSEE QUEENS for several seasons, and the quantity of standing orders from old customers, I decided not to advertise until my books were cleared of orders, and thus avoid disappointing customers.

I am now ready to fill orders by **RETURN MAIL.** Breeders used: Imported dark leather-colored Italian; my selections from light imported Italian; Moore's long-tongue; golden; Carniolan (mated to Carniolan drones in distant yard, and to Italian drones); imported Caucasian (lately received, mated for the present to Carniolan and Italian drones).

Prices until Oct. 1.		After Oct. 1.		Tested—	
Untested 12 for	$6.00	Untested 12 for	$7.50	Each	$1.50
" 6 for	3.25	" 6 for	4.00	Breeders—	
" 1 for	.60	" 1 for	.75	Each	3.00

27A13t **JOHN M. DAVIS, Spring Hill, Tenn.**

Wisconsin Basswood Sections

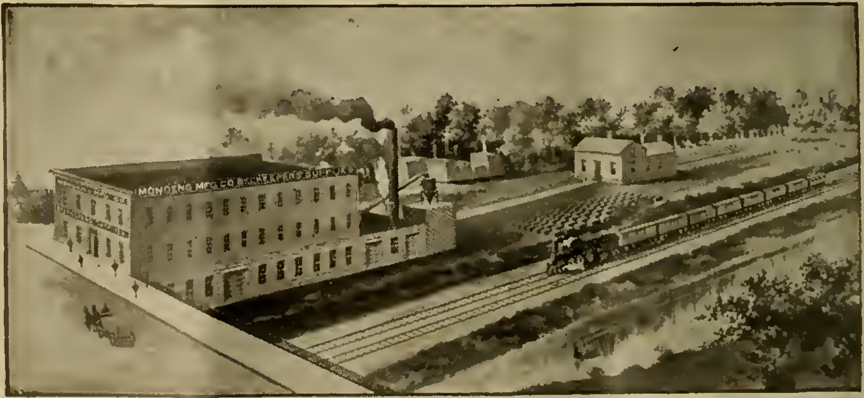
And Prompt Shipments
Is what we are making for our customers.
— DOVETAILED HIVES AND SHIPPING-CASES —
We carry a full line of SUPPLIES. Ask for Catalog.
THE MARSHFIELD MANUFACTURING CO., Marshfield, Wis.

Shipping-Cases

The difference between good Cases and poor Cases is the difference between loss through breakage in shipping.

John Doll & Son's Shipping-Cases are known far and near for quality. They have a reputation for honesty. These Cases cost no more than the poorest—why not have the best? Send your order to us now to insure prompt shipment.

JOHN DOLL & SON,
Power Building, MINNEAPOLIS, MINN.


MONDENG MFG. CO.

We are...... Manufacturers of **Bee-Keepers' Supplies**

SHIPPING-CASES — EXTRACTORS —SECTIONS—HIVES—AND EVERYTHING FOR THE BEE-KEEPER

Send for Illustrated Catalog and Price-List. Prompt Shipments. Low Prices.

MONDENG MFG. CO.,
147 and 149 Cedar Lake Road, MINNEAPOLIS, MINN.

Bee Supplies
Guaranteed Superiority!
Lowest Prices

We have been making Bee-Hives, Sections, etc., for over 20 years.

New .. Illustrated .. Catalog free; also sample copy of

The American Bee-Keeper

(Monthly, 50 cts. a Year.)

The best magazine for beginners. (It has been published by us regularly for 15 years.)

Address,
THE W. T. FALCONER MFG. CO.,
JAMESTOWN, N. Y.

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— ITALIAN —
Bees, Queens and Nuclei

Choice home-bred and imported stock. All queens reared in full colonies.

One untested queen..... $ .65
One tested queen......... .90
One select tested queen.. 1.10
One breeding queen 1.65
One comb nucleus (no queen)................. 1.00

All grades ready to send by return mail.

Safe arrival guaranteed. For prices on quantities and description of each grade of Queens, send for free price-list. 100 or 200 lbs. of Brood Foundation. Send for sample and prices.

J. L. STRONG.
204 East Logan Street, CLARINDA, IOWA.
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HONEY AND BEESWAX
When consigning, buying or selling, consult
R. A. BURNETT & CO.,
199 SOUTH WATER ST. CHICAGO, ILL.
Please mention Bee Journal when writing.

DEATH TO LICE.

LICE SAP LIFE

That's how they live and thrive. You can't have healthy, profitable fowls or stock and have lice too.

Lambert's Death to Lice

promptly kills all insect vermin and makes sitting hens comfortable. Sample 10c; 100 oz., $1.00 by express.

O. K. STOCK FOOD CO.,
D. J. Lambert, Vice-Pres.
406 Monon Bldg., Chicago, Ill.
Please mention Bee Journal when writing

NEW COMB HONEY-CROP OF 1905

We believe it would pay those having it in car lots or otherwise to write us. Give us your lowest spot cash prices, and fully describe the goods and style of package; when you can ship, etc. We handle more of these goods than any other firm in the U.S. Yours for business,

THOS. C. STANLEY & SON, Bees and Honey
Manzanola, Colo., and Fairfield, Ill.
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Headquarters for Bee-Supplies

ROOT'S GOODS

At Root's Factory Prices

Queens Now Ready to Supply by Return Mail

Stock which cannot be excelled. Each variety bred in separate apiaries, from selected mothers; have proven their qualities as GREAT HONEY-GATHERERS.

Golden Italians Have no superior, and few equals. Untested, 75c; 6 for $4.00.

Red Clover Queens Which left all records behind in honey-gathering. Untested, 75c; 6 for $4.

Carniolans —They are so highly recommended, being more gentle than all others. Untested, 75c; 6 for $4.00.

C. H. W. WEBER CINCINNATI ...OHIO...
Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

Honey and Beeswax

Chicago, Aug. 4.—Fancy white, 14c; No. 1, white, 13@13½c; fancy amber, 11@12c; No. 1, amber, 9@10c; fancy dark, 10c; No. 1, dark, 9c. White extracted, 6@7c; amber, 5@6c; dark, 5@5½c. Beeswax, 28c.

The new crop is appearing and selling in a fair way considering that this is midsummer time. R. A. Burnett & Co.

Albany, N.Y., July 26.—There is some call for honey, new crop, and if here would probably sell for best prices of season, as the general impression is there will be a large crop. White comb honey will start off at 15c to early buyers. H. R. Wright.

Kansas City, July 20.—New comb honey has made its appearance; fancy white in 24-section cases selling at $2.75 per case; No.1 at $2.50, and good demand. There is no new extracted in as yet, market on old stock being quotable at from 5@6c. Beeswax, 25@28c. C. C. Clemons & Co.

Cincinnati, Aug. 2.—At this writing there is a good demand for extracted honey; shipments are arriving daily. New comb honey is coming in quite freely, although the demand is only fair, a condition which may be expected early in the season. We quote amber extracted in barrels and cans at 5¾@6½ cents respectively. White clover extracted at 7@8½c. Fancy white comb at 12@15c. Beeswax, 26c. The Fred W. Muth Co.

Denver, June 26.—The demand for both comb and extracted honey is light at present, and there is enough of old stock on hand yet to last until the new crop comes in; the same is selling as follows: No. 1 white comb, per case of 24 sections, $2@$2.20; No. 2, $1.75@$2. White extracted, 6½@7½c per pound. Beeswax, 26c. The Colo. Honey-Producers' Assn.

New York, June 19.—The comb honey market is very quiet and we are hardly justified in making quotations, Some few lots are sold here and there at 13c for fancy, and 10@12c for lower grades, but no large blocks could be moved at these figures. There is still considerable of last year's crop unsold, part of which, no doubt, will have to be carried over until the fall. Extracted honey in fairly good demand. New crop California honey selling at 6½@7c for water-white, 6@6½c for white, and 5@5½c for light amber. Southern at 50@60c per gallon according to quality. Beeswax somewhat declining; choice average stock selling at 29c. Hildreth & Segelken

Philadelphia, Aug. 7.—Some honey arriving, with prospects of a good crop all through the East, but no call for comb honey during the hot weather, so that prices are not as yet established. Extracted honey arriving freely. We quote as follows: Fancy white, 7@8c; amber, 6@7c. Beeswax, 27c.

We are producers of honey and do not handle on commission. Wm. A. Selser.

Cincinnati, O., Aug. 8.—There is no demand for comb honey on account of the warm weather. Extracted is in usual demand for this season of the year. We quote white clover at 7@8c; amber, in barrels, at 5¼@5½c; in cans, 5¾@6c. Beeswax, 28c. C. H. W. Weber.

San Francisco, Aug. 2.—White comb, 1-lb. sections, 9@10 cents; amber, 7@8c. Extracted, water-white, 5@5¼c; white, 4¾@5c; light amber, 4@4½ cents; amber, 3½@4c; dark amber, 2½@3c. Beeswax, good to choice, light, 25@29c.

There has been no noteworthy movement in honey during the current week. Prices remain steady as quoted. Receipts have been of fair size and show a very superior quality. Local jobbers complain that apiarists are holding above the ideas of local dealers and therefore little business is done.

PURE BASSWOOD
HONEY
IN 60-POUND CANS

We have a good supply of **Pure Basswood Honey** in 60-lb. cans that we can ship by return freight at these prices: 1 can in a box, at 8 cents a pound; 2 or more cans, boxed, at 7½ cents—all f.o.b. Chicago. Cash with order. Sample, by mail, 8 cents in stamps, to cover package and postage.

Address,
YORK HONEY AND BEE SUPPLY CO.
141-143 Ontario St., CHICAGO, ILL.

Do You Need Queens?
By Return Mail?

If so, we can fill your order with the best Queens that money can buy. Try our strain of 3-band Italians; they will not disappoint you with empty supers. Untested Queens, 75 cents; $8 per doz. Tested Queens, $1 each. Send for circular.

J. W. K. SHAW & CO.
13Atf Loreauville, Iberia Par., La.
Please mention Bee Journal when writing.

"Experience Teaches a Hard School"

IT is a bad plan to give your order for Sections and Shipping-Cases, or in fact anything in the bee-supply line, to the man who quotes you the lowest price. There's as much difference in bee-goods as there is in people. Last spring a bee-keeper in Michigan wrote to firms throughout the country for prices on a large bill of goods. Some of the quotations he received were delightfully low and inviting, much lower than "Lewis" offered them at. The man took all his catalogs and correspondence to an old bee-keeper of long experience and asked his advice. **Result:** WE GOT THE ORDER.

LEWIS' GOODS are worth every cent they cost, and whether you receive them in the dead of winter or at the height of the honey-flow, or when your bees are swarming, they will fit accurately, admit of being put together quickly, and will be found to be made of the finest material. This saves you time; this saves you trouble; this saves you honey, and time, trouble and honey mean money to you. Your honey put up in good shape will bring higher prices, and the demand for it will be increased from year to year. This factory's reliable goods have started many a man on the road to success.

The Following are Distributing Points for Lewis' Goods:

ENGLAND
E. H. Taylor, Welwyn, Herts.

CUBA
C. B. Stevens & Co., Havana.

CALIFORNIA
Paul Bachert, Acton.
California Lumber & Milling Co., San Francisco.

COLORADO
R. C. Aikin, Loveland.
Arkansas Valley Honey Producers' Association, Rocky Ford.
Colorado Honey Producers' Association, Denver.
Fruit Growers' Association, Grand Junction, Robert Halley, Montrose.

ILLINOIS
Dadant & Sons, Hamilton
York Honey and Bee Supply Co., 141 and 143 Ontario St., Chicago.

INDIANA
C. M. Scott & Co., Indianapolis.

IOWA
Adam A. Clarke, Le Mars.
Louis Hanssen's Sons, Davenport.

MICHIGAN
A. G. Woodman, Grand Rapids.

MINNESOTA
Wisconsin Lumber Co., Faribault.

MISSOURI
E. T. Abbott, St. Joseph.

OHIO
Fred W. Muth Co., Cincinnati.
Norris & Anspach, Kenton.

PENNSYLVANIA
Cleaver & Greene, Troy.

TEXAS
Southwestern Bee Co., 438 W. Houston St., San Antonio.

UTAH
Fred Foulger & Sons, Ogden.

WASHINGTON
Lilly, Bogardus & Co., Seattle.

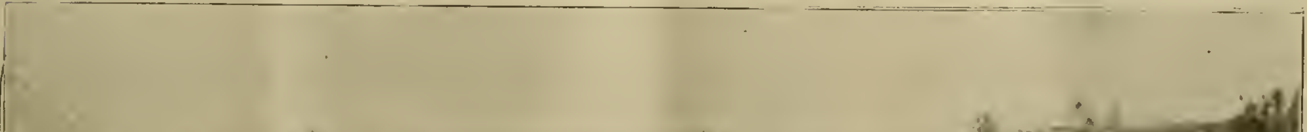
G. B. LEWIS CO. Manufacturers of Bee-Keepers' Supplies **Watertown, Wis.** U. S. A.

National Bee-Keepers' Convention at San Antonio, Texas,
Oct. 30, 31 and Nov. 1.

ESTABLISHED IN 1861
THE AMERICAN
BEE JOURNAL
OLDEST BEE-PAPER IN AMERICA

WEEKLY—$1.00 A YEAR
Published by GEORGE W. YORK & CO., 334 Dearborn Street

45th Year CHICAGO, ILL., AUGUST 24, 1905 No. 34



APIARY OF MRS. AND MR. JAMES HONAKER, OF VERNON CO., WIS.
(See page 602).

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY

334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec05" on your label shows that it is paid to the end of December, 1904.

SUBSCRIPTION RECEIPTS.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows that the money has been received and credited.

ADVERTISING RATES will be given upon application.

National Bee-Keepers' Association

Objects of the Association

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00

General Manager and Treasurer—
N. E. FRANCE, Platteville, Wis.

☞ If more convenient, Dues may be sent to the publishers of the American Bee Journal.

The Honey-Producers' League

(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

MEMBERSHIP DUES

1. Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.
2. Any honey-dealer, bee-supply dealer, bee-supply manufacturer, bee-paper publisher, or any other firm or individual, may become a member on the annual payment of a fee of $10, increased by one-fifth of one (1) percent of his or its capital used in the allied interests of bee-keeping.

GEORGE W. YORK, Manager,
334 Dearborn St., CHICAGO, ILL.

Italian Queen-Bee Free as a Premium

To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us ONE NEW subscription with $1.00 for the Bee Journal a year. Now is the time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.

HONEY-JARS.

For a limited time we offer No.25 Honey-Jars, porcelain cover, metal screw cap, holding one pound of honey net, one gross in case complete in 5-gross lots, $4.00 per gross; less quantities, $4 50 per gross, f o.b. New York. If you want to secure some, let us know at once.

HILDRETH & SEGELKEN,
265 & 267 GREENWICH ST., NEW YORK, N. Y.
11Atf Please mention the Bee Journal.

IN THE HEART OF MICHIGAN

Within a hundred miles of me are over ¾ of the bee-keepers of Michigan. I am on the Pere Marquette R.R., which completely covers this region. Root's Goods, Factory Prices, Prompt Service, Low Freight. Send for Catalog.

GEORGE E. HILTON,
28A12: FREMONT, MICH.
Please mention Bee Journal when writing.

"If Goods are wanted Quick, send to Pouder"

BEE-SUPPLIES

Root's Goods at Root's Prices

Everything used by Bee-Keepers.
POUDER'S HONEY-JARS. Prompt Service.
Low Freight Rates. ∴ ∴ ∴ Catalog Free.

Hoosier Strain Italian Queen-Bees by Return Mail

Untested Queen	$ .75	Select Breeding Queen	$5.00
Select Untested Queen	1.00	Best Imported Queen	5.00
Tested Queen	1.00	Fair Imported Queen	3.00
Select Tested Queen	2.00		

WALTER S. POUDER,

513-515 Massachusetts Ave., INDIANAPOLIS, IND.

Please mention Bee Journal when writing.

Millions of Sections Shipping-Cases TONS of COMB FOUNDATION

Abundance of Bee-Smokers, Bee-Veils, Bee-Escapes, Bee-Hives, etc. Everything the bee-keeper needs. The best goods made. **Lewis' Goods in Indianapolis at Factory Prices. Orders received in the morning shipped same day.** FINE ITALIAN QUEENS mailed promptly from our breeder, here in the city. Untested, 75c; Select Untested, $1.00; Tested, $1.00; Select Tested, $2.00.

C. M. SCOTT & CO. 1004 EAST WASH. STREET
INDIANAPOLIS, IND.

N.B.—A Porter Bee-Escape, or its equivalent, **FREE** with first order, if you say where you saw this ad.

Please mention Bee Journal when writing.

Dittmer's Foundation is the Best.

Send for Catalog, Samples and Discounts, and judge for yourself. 1904 output, 50 percent increase over 1903.

Full line of SUPPLIES, wholesale and retail.

Working Wax into Foundation for Cash a Specialty.
E. GRAINGER & Co., Toronto, Ont., Sole Agents in Canada for Dittmer's Foundation.

GUS DITTMER, Augusta, Wis.

Please mention Bee Journal when writing.

Lewis' Shipping-Cases Sections, and a full line of Bee-Supplies

BY RETURN FREIGHT OR EXPRESS. Send to

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What is the United States Government Doing for the Bee-Keeper?

A general view of the Experimental Apiary of the U. S. Government, at Washington, D.C., in charge of Frank Benton. Photographed by D. E. Lyon.

Do You Know?

Do you realize to just what extent Uncle Sam has the interest of his bee-keepers at heart? Few do. To get the whole truth we have sent Mr. D. E. Lyon to Washington with instructions to place before the readers of Gleanings just what is being and what intends to be done by the Division of Apiculture of our great National Department of Agriculture at Washington. Mr. Lyon gives the results of his journey in the August 15th number of Gleanings. What he tells is intensely interesting, and every bee-keeper should know the facts. Mr. Lyon has also obtained some splendid photos, which are reproduced in this number.

Mr. Frank Benton, head of the Division of Apiculture, is now on a journey around the world in search of new Bees and Honey-Plants. Gleanings keeps in close touch with him, and its readers are always sure of obtaining news first hand of this most remarkable trip.

Grading Rules

In the August 15th issue of Gleanings is found another article of greatest practical value to bee-keepers. It is headed, "Comb Honey Grading Rules." Hardly one bee-keeper in ten understands grading, which is of such importance in marketing comb honey. For this reason there is much confusion and loss. Gleanings has written to the most prominent Honey Dealers all over the United States, and gives their replies in this number. It's an important thing to know how to grade your honey, and Gleanings tells you.

Superb Illustrations

The illustrations in the August 15th issue of Gleanings are typical of what its readers receive every number. Three full-page halftones, some smaller ones, and many line drawings illustrating the numerous short articles. The halftones are the work of the finest engravers in the United States, and are printed on the best paper, giving results that are hardly equaled in many high-class magazines. This item alone doubles the value.

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Gleanings aims to make itself indispensable to *every* bee-keeper *everywhere*. It has succeeded. No progressive bee-keeper can afford to be without it. In every issue are departments that cover the peculiar conditions that are met in different parts of the country. The editors of these departments are the best practical bee-keepers in their respective localities. The best of bee-keepers everywhere contribute. A list of them would be a list of the most successful bee-keepers in the United States. What bee-keeper can not profit by reading the experiences of such men?

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GEORGE W. YORK, Editor | CHICAGO, ILL., AUGUST 24, 1905 | Vol. XLV—No. 34

The American Bee Journal is absolutely an independent publication, and not connected with any bee-supply business whatsoever. It stands entirely upon its merits as an educative force in the field of bee-keeping, and as a medium for legitimate advertisers in apicultural or other lines. It is the oldest, and only weekly, journal of its kind in America. Its publishers believe that it deserves to be in the hands of every would-be progressive successful bee-keeper in the land. It is in its 45th year, and to-day is acknowledged to be better in every way than at any time during its long and honorable history.

Editorial Notes and Comments

Contradictions in the Bee-Papers

Occasionally the view is expressed that there are so many conflicting views in the bee-papers that it is discouraging; so discouraging that one would do better to give up such reading altogether. There is no disputing the fact. Just so long as you read bee-books and bee-papers you will find contradictions. If you never read a word about bees you would find contradictions in your own experience.

The contradictions you find in print sometimes are due to the fact that wrong views are entertained, and sometimes to the fact that what is true in one locality is not true in another, and often to the fact that some little difference in management is not recognized, but that same unrecognized difference in management makes a wide difference in results.

Often, too, the reader gets two opposite views from two different writers because said reader does not fully understand what one or both said. But if you keep on reading and studying, you will gradually get more and more of the tangles straightened out. It would be the height of folly to give up trying to obtain the advantage of the experience of others just because the experience of different writers is not always the same.

Big Purchase of Honey

Gleanings in Bee Culture chronicles the purchase in one consignment, by the National Biscuit Co., of *70 carloads of honey*. That is not because honey is the cheapest sweet. It is not because the National Biscuit Co. lacks business capacity, and recklessly spends money for a higher-priced article when something else as good could be bought for less money. It is because honey gives to the goods in whose manufacture it is used a keeping quality that can be had in no other way. If it is a profitable thing for this money-making company thus to use honey, why is it not just as profitable in the home of every bee-keeper? Instead of making a fresh cake "when company comes," said cake to be kept till thrown away when dry and stale, why not make that which will keep the year around?

In all cooking, honey may be used in place of sugar, only keeping in mind that less moisture must be used with honey than with sugar.

Selling Comb Honey in Frames

For some this may be an advisable thing. Here's the way L. L. Grass does it, as reported in Gleanings in Bee Culture:

> I produce comb honey by using extracting-supers and shallow extracting-frames with starters. These weigh from 3½ to 5 pounds when filled out, according to thickness of comb in a frame. This I sell at 15 cents a pound by the frame or frames. I weigh it before starting, and put the weight of each frame on the top-bar. Customers seem to appreciate that style of package, and I very seldom fail to make a sale to those who need honey, after I have held it up to the light to let them see the clearness.
>
> I carry it to market in the supers by tacking a strip of wood half way down the ends of the supers with slots sawed out to hold 8 frames to a 10-frame super. That keeps them from rubbing and breaking the cappings when some combs are thicker than others after grading. It also keeps them from sliding, which they would do after the first frame is taken out.

Slow Introduction of Queens

There are conditions in which a queen will be promptly and kindly received, no preliminary caution being necessary. The queen is simply dropped into the hive or run in at the entrance, and all is well. But there is always some risk, and, as a general rule, the element of time is an important factor. The queen is sometimes caged in the hive for a certain length of time, then set free upon the combs by the bee-keeper, but generally it is planned to have her liberated by the bees. To make them longer in liberating her, the candy may be made quite hard, or pieces of card-board may be nailed over the opening so that the bees must take time to gnaw away the card-board to get at the candy.

One of the American Bee Journal family thinks he has made an improvement over these plans. It is the very simple one of making as small as practicable the tube containing the plug of candy. Instead of having the diameter a half inch or so, it is only a quarter of an inch, allowing only one bee at a time to work at the candy. It will be readily seen that this will make slow work, but work that is pretty sure to go steadily forward, because the candy is fully exposed. With a small diameter, the time taken to liberate a queen in an introducing cage may be varied directly in proportion to the length of the tube.

Cleaning a Bee-Smoker

When a thick coating forms inside the smoker pour in a little kerosene and set fire to it, leaving the smoker open. The deposit can then be easily scraped off while hot and soft, or peeled off when cold. This from J. A. Green, in Gleanings in Bee Culture.

Sawdust for Smoker-Fuel

The question as to the best fuel for smokers is one largely of convenience. Each one is likely to have a preference for that which is most easily obtainable. To those who have unlimited quantities of sawdust at disposal, the very minute instructions of S. E. Miller, in the Progressive Bee-Keeper, may be of use. He says:

> I used sawdust from under my buzz-saw table, which is mostly from pine or other soft wood, and the smoker is of the upright boiler (fire-pot) pattern, the kind now in general use.
>
> Directions: First, put down on the grate a small wad of excelsior or fine shavings. In the absence of both of these use grass. Put on just enough to keep the sawdust from sifting down through the grate into the space beneath it. Next fill the fire-pot to within about three-fourths of an inch of the top with sawdust soaked and packed down until it is packed somewhat firm, but not too solid. Then with a pointed stick bore a hole down

in the center by running the stick down nearly to the grate and giving the upper end a rotary motion so as to form a funnel-shaped hole in the sawdust. Into this hole drop about a teaspoonful of kerosene. I keep a 10-cent oiler with kerosene (coal oil) in it where it is handy, and find it useful in firing up, even when I do not use sawdust.

Now light a match and drop it into the hole and set the smoker outside with the cover thrown back, and leave it so for 15 or 20 minutes. Do not close it too soon or it will smother out in short order. After it is well started put some green grass on top of the sawdust to act as a spark arrester and close it up. Give several puffs to make sure that it is well started, and if you have done everything just right, you will be ready for 3 or 4 hours' work without replenishing of fuel.

When it gets too hot and begins to throw sparks it will be necessary to grab up a bunch of green grass and put it on top to keep down the sparks.

◆

Destroying Queen-Cells

Nearly every beginner, at some time in his career, conceives the idea that if he persistently destroys all queen-cells that are started, there will be no swarming. But he finds in time that bees will swarm in spite of such efforts, and concludes that the destruction of queen-cells has no effect whatever. Yet some experienced bee-keepers declare that in many cases destroying queen-cells one or more times is sufficient to prevent all swarming. Under such efforts some colonies will be prevented from swarming, others will not. The seasons may make a difference—undoubtedly do. Some seasons bees seem to have a mania for swarming; other seasons a good many colonies will make no attempt at it. Whether there is profit in destroying queen-cells is an open question.

◆

Drone-Brood for Fish-Bait

Some years ago this was mentioned, and now it comes up again in Gleanings, more particulars being given. The knights of the rod "specify that the age of the brood shall be just before hatching, when the young drones are white. A young white drone is removed from the cell and strung on the hook. Its color and shape at once suggest to the fish a big, fat grub, and anglers say that fish will bite this bait as they will bite almost nothing else. It is especially adapted to all fish with large mouths like bass, bluegills, and the like."

Some Expert Opinion

More Honey from the Basswood Leaves or the Blossoms?

Ques. 29—*Is it true that the bees gather more from basswood leaves than from basswood blossoms?*

S. T. Pettit (Ont.)—No.

O. O. Poppleton (Fla.)—I don't know.

J. M. Hambaugh (Calif.)—I think not.

Jas. A. Stone (Ill.)—I do not think it is.

E. D. Townsend (Mich.)—No, not in this locality.

L. Stachelhausen (Tex.)—No basswood in this locality.

Adrian Getaz (Tenn.)—No, unless in exceptional circumstances.

N. E. France (Wis.)—No. I did not know that basswood leaves yield honey.

G. M. Doolittle (N. Y.) — Bees gather *nothing* from basswood leaves in *this locality*.

C. P. Dadant (Ill.)—I think not. I have never seen much from either, in this locality.

Dr. J. P. H. Brown (Ga.)—I can not answer, as I do not live in a basswood location.

Eugene Secor (Iowa)—Not in this locality. I never saw bees gather anything from basswood leaves.

E. Whitcomb (Nebr.)—I do not know. It is at least 75 miles from my apiary to the nearest basswood tree.

J. A. Green (Colo.)—I think not. They may get honey sometimes from the leaves, but ordinarily, at least, not in any quantity.

Dr. C. C. Miller (Ill.)—I shouldn't suppose so. I've seen many a bee working on the blossoms, but never one on the leaves.

Rev. M. Mahin (Ind.)—I think not. I have never seen them gathering from leaves, and in my locality I am pretty sure they do not.

R. C. Aikin (Colo.)—I never lived in a regular basswood region, and don't think leaves yield any except in cases of insect honey-dew.

P. H. Elwood (N. Y.)—I never saw our bees work on basswood leaves. I never suspected that they gathered an ounce from that source.

E. S. Lovesy (Utah)—As to quantity, I have had no experience on this question, but as to quality I would say that no real, pure nectar is collected by the bees from leaves such as they collect from the flowers. The product on the leaves is produced by a small insect of the aphid family; the dew softens it, and hence it is called "honey-dew," and bees and other insects gather it.

Prof. A. J. Cook (Calif.)—No, by no means. They gather wholly from flowers, except there are aphids or scale insects in the trees working on them.

Morgan Bros. (S. Dak.)—Basswood leaves yield very little. Basswood honey is secreted in the calyx of the flower, and may be seen sparkling in the sunlight.

Arthur C. Miller (R. I.)—Bees do not work on basswood leaves here. But basswoods are few and far between, the European linden taking their place, and the bees go only to the blossoms of that.

C. Davenport (Minn.)—This is something I never heard of until lately. I never saw the bees work on the leaves, and I do not believe they ever do here. I will watch this matter closely in the future.

R. L. Taylor (Mich.)—Sometimes I have seen the bees apparently working a little on basswood before the blossoms are open, but not when they are open. But a trifle if any nectar is gathered from the leaves here.

Mrs. J. M. Null (Mo.)—I would like to know. I don't relish the notion of basswood honey-dew. We don't have it in this neck of the woods. All honey-dew, or at least most of it, is derived from hickory leaves here.

C. H. Dibbern (Ill.)—I never knew that bees gathered any *honey* from basswood leaves. It is not true that they gather more from that source than from the blossoms, otherwise why do many bees visit the basswoods when not in bloom?

E. E. Hasty (Ohio)—I don't think it is a common state of things, although it may have happened sometimes, especially in recent years when the crop was small. 'Spects the old-fashioned 10-pounds-a-day basswood honey never came from the leaves.

Wm. McEvoy (Ont.)— No. Some seasons the bees gather honey-dew from the leaves, but this condition of affairs happens so rarely that it's not worth counting, and although it is really honey-dew it gets spoiled by the countless millions of "stuff" that feast upon and soil this class of honey.

G. W. Demaree (Ky.)—No, not in my locality. In fact, bees do not gather "honey" from the leaves of basswood, or any other kind of leaves. But under certain conditions, not very well understood, bees gather a dark, sweet substance (condensed sap) called "honey-dew." But in my locality honey-dew does not show up more than once in 5 years.

Contributed Special Articles

OUR TOIL DOTH SWEETEN OTHERS

Bee-Paralysis and Pickled Brood

BY ADRIAN GETAZ

DURING the years from 1894 to 1896 quite a discussion on bee-paralysis occupied the bee-papers. Many articles and reports were written, and a number of remedies tried and the results reported. It must be remembered that at that time bee-paralysis seemed to have been much worse than usual. In fact, whole apiaries had been wiped out entirely.

It is in the early spring that the malady is the worst. It is shown by a large majority of the bees being hairless and shiny, as if they had been polished. At the same time they are stiff and sluggish in their movements, as if half-paralyzed. Those in which the disease is less advanced show it by uneasiness and frequent scratching and twisting of the wings and abdomen. As the season advances the old, shiny bees gradually die out, young bees emerge in large numbers and take their place. It is possible—even probable—that some at least of the young bees contract the disease when in the larval state, but as bee-paralysis is a slowly developing disease, they do not show the signs of it until some time after having emerged, more or less, according to how bad the case is.

When the number of healthy, or comparatively healthy, young bees has sufficiently increased so that the management of the colony (if I may use that term) falls into their hands, they soon realize that something is wrong with the old, shiny bees, and proceed at once to throw them out of the hive. This is sometimes done gradually, but usually all at once. That is, when the old bees have not already died out from old age and sickness.

During the summer the bees do not live long enough to reach the shiny stage, unless it be in exceptionally bad cases, but plenty of them can be seen shaking and quivering.

CAUSE OF BEE-PARALYSIS.

Microscopic and bacteriological investigations have shown that bee-paralysis is due to the presence of a bacillus. The expression "a bacillus" does not mean that there is only a single one in each diseased bee, but it means that all are of the same kind. That kind is called *Bacillus Gaytoni*.

What is bacillus, or what are the *bacilli* of different kinds? Bacilli are classified as "plants," though they are not at all like flowers, trees, grass, etc. They are like very small rods. The kind of bacilli, or to use accepted terms, the bacillus that produces foul brood is only one-thousandth of an inch long, and one 40-thousandth of an inch thick; while that producing bee-paralysis is only one 15-thousandth long and one 35-hundredth thick.

When bacilli have attained their full size, they break into two or more pieces. Each piece grows until full size, and breaks also, and so on. This process lasts as long as there is plenty of nourishment and sufficient heat and moisture. When these conditions fail, the rods become spores of a more rounded form. These spores will resist the disinfectants, poisons and other noxious substances; also the extremes of cold and heat, far better than the rods. They will keep alive without developing for quite a length of time, and then turn into rods when the proper conditions are met with. The body of a larva affected may contain, not thousands, but millions of these rods. When the larva dies they still consume the soft parts and multiply for awhile, and then turn into spores, escape, and float in the atmosphere. Some reach the honey and remain there, and likely some are taken in by the bees or brood in the act of respiration, or otherwise.

But here comes the most remarkable part of the program. These spores, which resist heat, cold and chemical agents so well, require a certain amount of moisture to keep up their vitality. Dry air does not contain enough. So those of the spores that have not found a safe lodgement in the honey or the bodies of some larvæ or bees, dry out and lose their vitality in the course of a day or two. And this is a general rule (there are some exceptions) with all kinds of bacilli. Every one knows how beneficial sunshine and dry climates are to the sick people.

CULTIVATION.

Here the question might be raised, How do we know that these tiny creatures do the mischief—such little things that it takes the most powerful microscope to see them.

Well, we know it by *cultivating* them. Small glass vials about a half-inch in diameter and a few inches long are prepared. In these are placed some beef-broth, gelatine, milk, or anything on which we think the bacilli will thrive. The vials are stopped with some cotton, then carefully heated and otherwise treated so as to make sure that no germ from the air, or anything else, can get in and interfere with the *culture*.

Suppose we want to study the bacilli producing foul brood or bee-paralysis. We cut a small piece of the extremity of the tongue of a bee from the diseased colony. That piece contains a minute drop of blood, and that drop, minute as it is, a number of bacilli. We put it in the vial. Soon after the bacilli begin to multiply there just as they would in the body of a bee. We can study them easily, and ascertain all we want about them. Then, to be sure that we are right, we take some of that culture, feed it to some bees or brood that we know to be healthy. Then if the disease develops we know that we have the bacilli wanted, and that said bacilli are the cause of the disease.

DEVELOPMENT.

The chief difference between foul brood and bee-paralysis is that the first is a rapidly developing disease, and the other a slowly developing one.

The first result is that in the cases of foul brood, the brood infected dies before ready to seal, or soon after. This does not occur with bee-paralysis. The malady develops so slowly that the affected brood would not die until some time at least after having emerged. It is possible—even probable—that the majority of sick bees contract the malady only after reaching the adult state.

It is often said that foul brood is a disease of the brood, but not of the adult bees. That is an error. All the microscopical investigations made have shown bacilli in the adult bees—workers, drones and queens, as well as in the brood. Even the ovaries of the queen have been found infected. Such being the case, it may seem strange that the malady is not propagated by the adult bees unless they carry some infected honey. It is a known fact that sick bees go out of the hive and die away from it. Cheshire thinks that since foul brood develops so rapidly, the bees which contract it get very rapidly too sick to remain in the hive, and go out to die before they can infect the others.

INFECTION FROM THE QUEEN.

It is an indisputable fact that bee-paralysis may be transmitted by the queen. Probably by laying infected eggs. The malady is very contagious, anyway, and spreads very rapidly from one hive to the others.

Some writers have said that there are two stages, so to speak, of the disease. In the first the disease is about as I described at the beginning of this article. But sometimes a turn for much the worse comes all at once; the bees become shiny rapidly, the work is almost neglected, young bees just emerged, or only two or three days old, are shaking and quivering; and ere long the colony perishes.

When it comes to that point it is probable that the eggs laid by the queen are infected. I don't know whether any microscopical examination to that effect has been made or not. In fact, bee-paralysis has been studied very little yet, and much remains to investigate.

I had one case like that once, upon which I tried an experiment. While the colony had reached the worst stage of the disease, it was pretty strong yet. The honey-flow was good, and the temperature sufficiently high. I removed the queen and gave the bees a young laying queen. In due time her progeny hatched out, strong and healthy, or apparently so, and soon after they cleaned out the old bees. Of course, the disease reappeared, but nothing to be compared to what it was while the old queen was there. Evidently the old queen was infected and was laying infected eggs. I did not make a microscopical investigation. I have neither the time, the means, nor the ability necessary for that kind of work.

REMEDIES.

A great many were tried during the years referred to at the beginning of this article. The most popular were re-queening, salted water, and sulphur.

Re-queening is not a cure, but always an improvement, especially if the old queen is more or less diseased already. In any case, a young prolific queen would cause an increase of young, comparatively healthy bees, and that of itself would be a considerable improvement.

The other remedies are of but little account at the best. Every few days somebody reports having applied sulphur, salt, or something else, and met complete success—the shiny bees had completely disappeared. Unfortunately the disease invariably reappeared the following spring. As the old, shiny bees would have disappeared anyway—either died out or been driven out—the conclusion forced itself upon the mind that the remedies used had but little effect at the best.

CAMPHOR.

My bees had the disease from the beginning. It kept on increasing during several years until I finally either had to do something or quit keeping bees. The bacilli are in every part of the bodies of the bees or brood, chiefly in the blood. The spores may be anywhere in the hives, and very likely like those of the foul brood in the honey and pollen. Feeding with carbolic or salicylic acid would fail to reach the spores, and perhaps act only in the digestive organs of the bees. Dusting with sulphur or other similar substances would certainly kill whatever spores or bacilli it would reach, but would fail to reach the honey, especially if sealed, or even the blood or other interior organs of the bees. Spraying would not be much better. Fumigating would be the thing, the vapors would penetrate everywhere in the hive, even through the cappings, and through the bodies of the bees also.

This may seem rather "off," but it is not. The bees and other insects breathe through a far more complete apparatus than the higher animals. What we might call their lungs ramify and penetrate everywhere throughout the whole body. Evidently some substance that would evaporate freely would be preferable, as then the fumigating would be done automatically. At last I decided to try my camphor and crude carbolic acid. By that time the winter was at hand. I put a piece of camphor in some hives and a very small dish of carbolic acid in the others.

When the spring came a considerable improvement was noticed. The colonies were much stronger, the number of shiny bees very much smaller than ever before. There was but little difference between the two remedies, and what may have been was in favor of the camphor, so I dropped the carbolic acid. Neither one can be used during the summer. The carbolic acid, if given in anything like an effective quantity, is liable to cause the bees to abscond. As to the camphor, they enclose it in an envelop of wax and propolis in less than 24 hours after it is given.

For several years I repeated the treatment every winter with the result that the disease became less and less, and finally disappeared, as far as I could see. Then I discontinued the treatment. But last summer (1904) I saw again a few bees here and there twitching and scratching, showing that the cure had not been complete. The malady might have been re-introduced from abroad. If it was, it came through some of the queens I bought, as there are no bees near enough mine to give them the disease. But I rather think that the cure was not complete.

Bee-paralysis is a very erratic disease. Sometimes it appears, or disappears, or nearly so, without any cause or reason that can be assigned. And it is possible that the disease decreased of itself, and that the supposed effect of the camphor applied was a mere coincidence.

PICKLED BROOD.

This seems to be essentially a disease of the brood, or rather of the pollen first, and then the brood fed on that pollen. The first intimation of it is some larvæ having a dull appearance, and stretched or turned in a wrong position. More and more are seen, and as the disease advances they become a kind of yellowish gray, eventually turning to brown. Most of them finally die before being sealed, others only after.

When a large portion of the brood has become diseased, the bees discontinue brood-rearing entirely, and cease to bring in pollen. Eventually the sound brood hatches out, and the dead larvæ dry enough so that the bees can take them out, which they do. They also clean out the infected pollen, and if at that time the hive is examined, the combs will be found as bright and clean as they can be. The queen has died, and no attempt at rearing another has been made. This has invariably occurred in every case that I have seen, when left to themselves. It seems, therefore, that the queen also becomes diseased, which is likely to be, since she receives the same nourishment as the larvæ. The adult bees and drones seem to remain healthy throughout. However, if a microscopical investigation is ever made, it may show a different state of affairs.

The malady is not contagious, or very little if at all, and does not spread from one hive to the other. Some one in these columns suggested that since the malady is not contagious, it would be best to break up the colony and distribute the combs among the other colonies. I certainly would not risk it. Because the malady is not contagious from *hive to hive*, it does not follow that it is not so from *comb to comb* in the same hive. In fact, it spreads over all the combs of an infected hive, and there is no reason why it should not do so where a diseased comb is introduced in a healthy colony. It would be easy to try, but I don't care to do it.

If the queen gets sick, the cessation of brood-rearing may be due to her condition. However, it is not so in all cases. I once removed the queen and put in her place a young laying queen. She laid a few hundred eggs and quit. The bees made no attempt at brood-rearing, and did not even resume pollen-gathering. The eggs remained unhatched some 8 or 10 days, and finally disappeared.

CAUSES OF PICKLED BROOD.

Some have said lack of honey, some lack of pollen. It is neither one. I never had a case yet where there was not some honey, and sometimes there was a considerable quantity of it. It certainly is not the lack of pollen. In my locality, pollen could be had by the ton the whole summer, from pumpkins, melons, corn, ragweeds, and lots of other sources in succession. When the disease reaches a certain point, the bees cease to bring in the pollen ; that's all there is to it.

The investigations of Dr. Howard show that the disease is due, not to a bacillus, but to a fungus—*Aspergillus Pollini*. It develops in the pollen, and thence into the digestive apparatus of the brood. Dr. Howard thinks that the malady could be carried from one hive to the other by robber-bees. So far as I remember, the most I had of it in any one year was 4 colonies in one apiary and 3 in the other. Last year I had 1 case, and the year before none. That does not look much like contagion.

CURE FOR PICKLED BROOD.

The advice is usually given to melt the combs, pollen, brood and all, and start the colony on foundation again. That always seemed to me to be too much trouble, and I never have done it. I let the thing go through its course, and when the bees have cleaned everything I give them a queen and some brood to start anew. I have tried carbolic acid, given as described above, that is, letting its vapors do the work. It is effectual. The only trouble is that if enough is given to effect a cure within a reasonable time, the bees may abscond.

The case I had last summer was discovered early: there was but little diseased brood yet, and quite an amount of sound brood nearly all sealed. I didn't want to lose all that brood, so I caged the queen, intending to come back 21 days later, after all the sound brood would be out, and then disinfect the combs by putting them in a box and burning sulphur. Somehow or other I was delayed, and when I visited the hive the bees had already cleaned everything thoroughly. I gave them another queen and some brood. The malady has not reappeared.

STARVED BROOD.

Several times dead brood has been sent to Prof. Cook for identification. In some of his contributions he states that the brood sent him looked merely like starved brood. It may seem strange that such a thing should occur more often in California than elsewhere, but in reading the "Rambles" of J. H. Martin, in Gleanings, we find the statement that in many parts of California the summer temperature during the day reaches 100, and even 110 degrees, sometimes more. And in looking at the halftone engravings, we see the hives, single-walled at that, exposed to the hot sun without any protection whatsoever. More than that, the hives are right on the bare ground, in a climate where it does not rain the whole summer. Who does not know that in dry and hot weather the temperature of the ground exceeds considerably that of the atmosphere ? And with the hot sun above, and the radiation of the hot ground below, the temperature to which these hives are exposed must be excessive. When the temperature is too high the bees are forced to abandon the hive. The brood left behind starves, or is overheated—likely both. Then the unlucky (?) Californian sends a piece of it to Prof. Cook, asking if it is pickled brood or bee-paralysis !

POISONED BEES.

Occasionally bees are poisoned by gathering nectar or pollen from fruit-trees that some ignorant person sprayed during blossoming time. Some cases of bees dying from the emanations of copper-melting furnaces or similar kinds of establishments have been reported. And, very often in such cases, the apiarist has thought that his bees had some disease.

Another cause of trouble is the gathering of nectar or pollen from plants having narcotic properties. Several kinds are known, but here (in the United States) the only important one is the yellow jasmine. The bees affected look, or rather act, very much like those having bee-paralysis, and frequently the two cases have been taken for each other.

DISEASES OF BEES.

Bee-paralysis and pickled brood have not been studied seriously yet. We barely know enough to recognize them, and none too well at that. Foul brood has been more thoroughly investigated, and yet it is only a short time ago that we finally learned to distinguish it from black brood and pickled brood. And the distinction is not yet as fully established as it might be.

A cause of mistakes may be the presence of more than one disease at the same time in the affected colony.

Recently, Prof. Lambotte, of Liege (Belgium), asserted that the so called *Bacillus alvei* was merely the well-known *Bacillus mesentericus vulgatus*. He was certainly mistaken, but it has since been suggested that both might have been present in the diseased colonies, and thus misled him.

More recently (last summer, 1904), Dr. Burri, of Zurich, (Switzerland), began a new study of the foul brood. He found in some cases the regular foul brood bacillus (*Bacillus alvei*), with all the characteristics described by Cheshire and Cheyne, and later by Prof. Harrison, of Ontario (Canada). In some other cases he found another kind of bacillus, which is extremely difficult to "cultivate," and therefore to study. Occasionally the bacillus mesentericus is found, but in small quantity, and seems to be accidental.

A third kind of bacillus has been seen, but seems to be very rare.

There is, furthermore, some acid brood—something like what we call here pickled brood—but Dr. Burri found it always in samples having also foul brood. It is caused by a kind of bacteria which do not form spores, and therefore is not a bacillus.

Other institutions in Germany have also taken up the question, and we may before long be thoroughly informed on all these questions.

Cheshire, in his examinations of diseased bees (see his book, Vol. II), found several organisms besides the foul brood and bee-paralysis bacilli, but he did not have the time to study them.

In Germany, in 1897, a peculiar disease was observed. Young bees incapable of flying came out and died in heaps. Much of the brood was dried up, retaining its form. It could not be cut with a knife, but broke to pieces under pressure.

The cause was ascertained to be a fungus similar to the one (*Oidium albicaus*) which attacks the mouth of infants.

Prof. Leuckart has also described a fungus (*Oidium Leuckarti*) which causes injurious, but not disastrous, effects in the intestines of bees.

Much is to be studied yet. Knox Co., Tenn.

Convention Proceedings

Report of the Chicago-Northwestern Bee-Keepers' Convention, held at Chicago, Ill., Nov. 30 and Dec. 1, 1904

(Continued from page 585.)

A NATIONAL HONEY EXCHANGE.

"Is there any movement on foot regarding a honey exchange or any method whereby the National Association can market its members' honey?"

Pres. York—There was a movement started in St. Louis to organize a National Honey Producers' Association, and there were some subscriptions of stock taken.

Dr. Miller—But not for the National?

The President—It was started in the National convention.

Dr. Miller—I think you are right that there was a movement started there to get up a honey exchange, but not that the National was to do anything about it.

Mr. Whitney—From the report which was sent me I think the Doctor is right. There was an attempt to organize something inside of the National, or by individuals who belonged to the National becoming stockholders of the new corporation if it was formed, for that purpose.

CASH FOR PROOF OF ADULTERATED COMB HONEY.

"I suggest that this Association offer $500 for two pounds of comb honey that is proved to be adulterated."

Pres. York—I don't know who suggested that, or where the $500 is to come from, but the intention no doubt is all right. It is proposed that this Association offer $500 for two pounds of comb honey. I suppose it is meant two pounds that the bees didn't make. What are you going to do with it?

Mr. France—I think nearly all here are members of the National and this was threshed over very thoroughly at St. Louis. I don't know why it should be brought up again. We know that manufactured or so called artificial comb honey has not been made or placed upon the market, and there is no necessity of agitating that matter here at length.

Mr. Wilcox—I read the proceedings of that convention at St. Louis, and I think all who have read it understand if anything is to be done it will need to come in a little different form from this. But I hardly see the necessity or advantage of trying to do anything. But if we do, we should need to put it in proper form or else we would create a wrong impression and say something we didn't intend.

Mr. Whitney—It seems to me it would be better to let the individual who manufactures that pound of honey take the A. I. Root Company's $1,000 for it. I understand they have an offer, and have had it for years, to pay $1,000 to anybody who produces the proof. If I were going to manufacture that pound of honey I would rather go to them.

"What can this Association do to counteract the evil effect of the publication of the manufactured-comb-honey story in the press of the country? Can we do anything? If so, what?"

Mr. Dadant—Publish statements to the contrary.

Dr. Miller—I doubt very much the ability of this Association as an association to do anything, but I don't at all doubt the ability of the individual members to do something by working through the local press. They can do a great deal in that direction. I doubt the wisdom of any action on the part of this Association.

Mr. Whitney—On that question I have something interesting—to me, at least. I heard of a merchant in this city who sold a lady a case of honey, and the next day she sent it back and came in in a day or two after to tell him she had sent that honey back. She said, "That is manufactured honey. It came from South Water street; it was made by machinery, and I never bought any such honey as that." He told her that she was mistaken, and convinced her it was not manufactured; that it was put in by the bees. She finally consented to let him send the honey back to her house. But there are plenty of people who really think that there is plenty of manufactured comb honey on the market. I meet them at home; intelligent people on everything else but bees and honey; they don't know anything about it.

Mr. Moore—Some of your may think we are threshing this thing out at unnecessary length. My specialty has always been honey for private families. Some of us visit the people who eat our honey on their tables, and you will all admit that they are not quite the biggest chumps on earth that are running the city of Chicago, large and small, rich and poor; and I want to tell you, from all those people, of all conditions in life, comes this question, "Is comb honey really manufactured?" And they ask me as an expert to answer it. "Is most of the honey on the market manufactured?" This comes to me in one hundred and one different ways. I have one answer. Of course I say that all comb honey is pure honey. Some of you perhaps do not come in touch with these folks in the way I do, and you think it is a question that we are putting too much stress upon, but every one of you ought to carry the idea through your lives, that whenever you can you want to strike a blow in favor of the right. Dr. Emma Walker, in the Ladies' Home Journal, put forth a statement in which she said that one of the largest uses of paraffin was to make manufactured comb honey. Then and thereupon I wrote to her contradicting it, and I wrote to the editor saying that it was absolutely false, and it was wrong for any one in her position to put forth a statement that would injure a large number of people. Mr. York also wrote to the editor a personal letter. We both got answers. I suppose that that department was flooded with letters from all over the country. We looked with a great deal of interest to see what would be done. Perhaps two months afterwards came the answer, an article in which she summed the thing up and said this and that authority said it was so; and that the Encyclopædia Britannica said that there was manufactured comb honey, and gave four or five different authorities stating that comb honey was manufactured and paraffin was largely used. But she summed it up at the bottom by saying that "after talking with practical bee-keepers and considering the matter in all its points we have decided that there is no such thing, and never has been, as manufactured comb honey." It was the result of our influence. Now, all of you go through life and remember to use your influence wherever you see the opportunity. Wherever you see in the newspaper an article with this falsehood, go to the newspaper, or write, and have it contradicted, if possible, and do not let a single instance go by of contradicting this infamous lie that has been passed around from one end of the world to another. That is the way in which this Association, and we as individuals, can do good; whenever we see a head, hit it!

(Continued next week.)

Honey as a Health-Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food", written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey". It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey the more honey they will buy.

PRICES, prepaid—Sample copy for a two-cent stamp; 50 copies for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; or 1000 for $7.50. Your business card printed *free* at the bottom of the front page on all orders for 100 or more copies. Send all orders to the office of the American Bee Journal.

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Some Facts About Honey and Bees.—This is the subject of an article written by Mr. J. E. Johnson, and published on pages 581-82 of the American Bee Journal for Aug. 25. 1904. We have republished it in 4-page leaflet form for general distribution, and furnish it, postpaid, at 35 cents per 100 copies. Send all orders to the office of the American Bee Journal

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Mrs. and Mr. Honaker and Their Apiary

I am sending you to-day a picture of a portion of our bee-yard, showing Mr. Honaker and myself. The bee-keeper has a scowl on her face, which her husband declares is "quite natural."

The yard is located in the garden directly back from the dwelling-house, so that all hives are in view from the dining-room windows. There are in all about 60 colonies, 3 or 4 more than were taken out of the cellar last spring. This is the number usually kept. All colonies have stored considerable surplus this season, duplicate hives being generally used for supers. All supers have honey in them, all but two or three being practically full. Besides what is now on the hives, we have perhaps taken off 600 or 700 pounds. The picture shows the apiary as it is to-day, having been taken less than a week ago.

The shrubbery back of the hives where Mr. Honaker stands is red raspberry bushes, which, at the present time, are well loaded with ripe fruit. The young trees shown further back are 6-year old walnut seedlings, some of which are perhaps 15 feet in hight. Nearly all swarms that have issued the last two years have settled on these trees, often breaking down limbs with their weight.

Back of the garden is a cornfield, just now beginning to tassel. In the distance, on the line between our farm and a neighbor's, is a large cherry-tree, which may be seen for many miles in all directions.

We use a large 12 frame hive, something like the Dadant hive. We produce mostly extracted honey, using always queen-excluders between upper and lower stories. We have no basswood within reach, our main crop coming from white clover, although alsike is grown quite extensively on our own and neighbors' farms. We have a small field of alfalfa, which, if it does well, will be enlarged another season. I am fortunate in securing a bountiful honey crop this season, considering that we have only the one dependence from which to obtain it. I have never had any foul brood in my apiary, although it is possibly at no great distance from us.

Mrs. Millie Honaker.

Vernon Co., Wis., Aug. 4.

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Laying Workers—Bees Moving Eggs, Etc.

My Dear Miss Wilson:—You have helped me so often through the American Bee Journal that I am afraid my gratitude is of the sort described as "a lively sense of favors to come." So I am sending you some of my summer bee-puzzles.

You helped me when I first began keeping bees, 3 years ago; last year I wrote to you about making artificial increase with Italian queens; this time my questions are chiefly as to the "ways that are dark" of the bees themselves.

I was in California all last winter, and did not return to unpack my bees till the middle of May. I think this was rather an advantage, as the spring was unusually cold. Two colonies out of 33 were dead, but the majority were in splendid condition, having nearly double the amount of bees and brood they had in May of last year, and they had no feeding. Only one colony had the listless, dispirited look about it that made me say before I opened it, "I expect this hive has no queen." But there was a queen, and brood, too, though only on 2 combs; but the capped brood was all drone-brood in worker-cells, and there were 3 vacant queen-cells at the bottom, and I thought it must be a case of a drone-laying queen. An unusually early swarm came out that day, and I put what bees there were (not very many) in with it, and killed the queen.

Lynch law—and the innocent murdered as usual! I put the brood in with the swarm, and a week later the rest of it was all beautifully capped worker-brood.

I have now another colony that I think has only laying workers. Over a month after swarming I found brood on 7 combs, but all the capped brood was drone-brood in worker-cells. This time I waited a week and looked again. Still there was no worker-brood, and there were a lot of queen-cells with little grubs in them. I cut these all out, and stapled 2 capped Italian queen-cells on the comb. Two days later they had not torn them down, and I hope the colony will right itself. If I do not find the worker-brood after 3 weeks, what should I do? Is it possible to find and destroy laying workers, and then give a laying queen? I was afraid they might kill one, if given with the laying workers in the hive.

I have been rather unfortunate with my queens. None of them are clipped, but I have found as many as 6 crawling on the ground. Three came out with first swarms, so I hived them as with clipped queens. Two are doing well, but the third has been another puzzle. I gave them one comb of honey at one side of the hive, and one comb of brood at the other, and the rest foundation only. A week later the bees had queen-cells on the brood-comb, and also on the corner of the new foundation next to it, and I could not find the queen. I gave them Italian brood, after cutting out the other queen-cells, and after 21 days I found a fine young queen and eggs on one comb.

I should have thought the old queen got hurt in swarming and died just after, if it had not been for the queen-cells—and queen-cells *only*—on the new foundation. The cells had good brood in them, which could only have been put there after swarming. Do you think they killed the queen as soon as they had gotten her to lay in their new queen-cells? Now ants carry their eggs about. Have worker-bees ever been known to carry eggs from worker-cells to more conveniently-placed queen-cells when deprived of a queen?

Now for my last puzzle, though I have a feeling that I am asking very foolish questions. But it is one of the best ways to learn.

A colony swarmed June 17. I did not know that it had swarmed before, but the brood left was all capped. I saw the queen that issued with the swarm go into the new hive, but I could find neither queen nor queen-cells in the old one. I gave them a comb of brood, and a day or two afterward I found 15 queen-cells on it. Feeling sure now that they had no queen, I waited till the brood was 7 days old; then I cut out all the queen-cells and gave them a comb of my best Italian brood, on which they immediately reared a number of fresh queen-cells. *Ten days* after I gave this brood, I looked again and found all the queen-cells capped, and some "nibbled" by the bees ready for hatching; and then, to my surprise, I saw on the comb among the capped brood several cells of baby brood. To make "sure" into "certain," I went home and got the magnifying glass. There they were, healthy looking larvæ, some looking only a day or two days out of the egg, and only 8 in all, uncapped on the comb. There was not an egg anywhere or a queen, that I could see.

Not wishing to lose the Italian queen-cells, I divided the bees and put the comb with the cells on in another hive, giving the old hive a fresh comb of brood. On this they have reared a lot more queen-cells, but there has been no fresh brood in the hive.

Now with all these queen-cells I can hardly think there ever was a laying queen in the hive. But where did that tiny brood come from?

Bee-books say the eggs hatch at 3 days, and are capped at the 9th. This is of course the rule, but do they ever hatch when a week old? The eggs of other insects often remain a long time before hatching. The hive with the other half of the bees and the queen-cells reared a fine-looking queen, but misfortune pursued them, too, and I suppose she was lost on her flight. There is no queen there now, and they are hard at work at queen-cells again.

Thus far there has been very little surplus honey; most of my colonies have not begun to put anything in the supers yet. Hitherto I have used only a top starter in my sections, but as you and Dr. Miller so strongly recommend a bottom one also, I am trying them in a number of marked supers to see the result in this locality.

Colorado.

July 22, 1905.

No, it is not possible to find and destroy laying workers. A laying worker looks like any other worker, and the only way you could distinguish one would be to find it in the act of laying while you held the comb in your hand. You might spend a long time before succeeding in this, and then when you had succeeded you would have put out of the way only one of a goodly number of workers engaged in the miserable business of laying eggs that by no possibility can produce worker-bees.

You did a good thing to give them a sealed queen-cell, for they will accept a cell when they would kill a queen. In the meantime, however, the colony will be rapidly diminishing in numbers, and you can give it aid without waiting until the prospective queen begins to lay. From any colony with a laying queen, take one or two frames of brood, selecting the youngest you can find, and exchange for one or two frames in the invalid colony. If you are willing to take the extra trouble, it will be better to take only one frame from a colony, and by drawing one each from four or more colonies you can give your patient quite a set-up. Neither will this cost very much to the colonies from which the brood is taken, if you select combs mostly filled with eggs and young brood.

There are those who are very positive that bees carry eggs from one place to another; others are skeptical about it. But it is not necessary to suppose there was any such transportation in the case you speak of, where eggs were found in queen-cells on foundation. Did you ever stop to think that in the usual course of events *every* queen is superseded by the bees? That superseding takes place generally in the latter part of summer, and it would be nothing strange if a good many queens made preparation for a successor immediately after being hived with a swarm. A queen may do excellent work at laying up to a certain time, perhaps up to the time of swarming, and then fail rapidly. If she disappeared from your colony entirely, before her successor was ready to set up in in business, it is not likely the bees killed her, but that she died from old age. And old age may come to a queen before she has lived a year, or not till she has lived 5 years.

Before any attempt at a guess in the case of your last puzzle, allow the remark that you need not worry as to any question about bee-keeping being considered foolish, unless it be one plainly answered in the books of instruction which bee-papers are supposed to supplement. Especially when one shows such intelligent powers of observation, any questions arising are likely to bring out points of interest that may be instructive to others as well as to yourself. A good questioner is, in an indirect way, a good instructor.

The presence of those few cells of young brood might be accounted for in more than one way. A queen might have been in the hive, and after having laid only a few eggs, she may have been accidentally killed by you when the hive was opened—queens are sometimes killed in that way. Laying workers might have begun work, and then desisted. As good a guess as any is the one you yourself have made. Eggs do remain in a hive sometimes without hatching for a number of days. Dzierzon reports a case of the kind.

After trying bottom starters, kindly report whether a success or otherwise.

"The Honey-Money Stories"

We have just issued a 64-page-and-cover booklet, $5\frac{3}{4}$x$8\frac{1}{2}$ inches in size, printed on enameled paper, entitled, "The Honey-Money Stories." The cover has a picture of a section of comb honey, $3\frac{1}{2}$ inches square, the comb being in gold-bronze, which gives it a very attractive appearance. Then on the gold-bronze comb are printed these words: "From Honey to Health, and from Health to Money."

It is edited by Earl M. Pratt, and contains a variety of short, bright stories interspersed with facts and interesting items about honey and its use. The manufactured comb honey misrepresentation is contradicted in two items, each occupying a full page, but in different parts of the booklet. It has in all 31 halftone illustrations, nearly all of them being of apiaries or apiarian scenes. It also contains 3 bee-songs, namely, "The Hum of the Bees in the Apple-Tree Bloom," "Buckwheat Cakes and Honey," and an entirely new one, called, "The Bee-Keepers' Lullaby." This last song has not been published before. The songs alone ought to be worth more than the price of the whole thing.

It is a booklet that should be placed in the hands of everybody not familiar with the food value of honey, for its main object is to interest people in honey as a daily table article. It is thought that it will be just the thing to sell on railroad passenger trains, on news stands, etc. The stories and items are all so short and helpful, and the pictures so beautiful, that it will likely be kept by any one who is so fortunate as to get a copy of it. Its postpaid price is only 25 cents, but the health-value of its contents would run up into dollars. We mail 5 copies for $1 00, or club it with the American Bee Journal—both for $1.10. It would be very nice for a gift to a friend.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to Dr. C. C. Miller, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Uniting Colonies—Space Under the Frames

1. What is the best way to unite 2 colonies of bees at this time of the season?

2. Is it detrimental to best results to have a 2-inch space in the brood-chamber under the frames? NEW YORK.

ANSWERS.—1. I don't know. What might be best in one case might not be best in another. Here's one way that is good: Kill the queen in one of the hives, and 2 or 3 days later set this hive over the other with 2 or 3 thicknesses of newspaper between, making a hole in the newspaper large enough for one or two bees to pass at a time. A few days or a week later you will find that the bees have eaten away much of the paper, and you can then put into the lower story the frames of brood that were in the upper story.

2. Only good can come of it any time except during the gathering season, and then the space must be reduced to $\frac{3}{4}$ inch or so. If the full 2 inches are left when bees are gathering, they will build comb below the bottom-bars.

Plan of Superseding Queens

What is the matter with the plan of killing undesirable queens, and changing their brood for the brood of the best queens? It looks as if this might be practiced to quite an extent in many apiaries. I am doing some of it now. IOWA.

ANSWER.—The plan will work all right, and you are wiser than the average to take that much trouble to improve your stock. The only "matter" I can see with the plan is the trouble it takes, but the gain ought to pay well for the trouble taken. Could not the work be lightened by having sealed cells ready in advance, giving a sealed cell in an introducing cage at the time of killing the queen? Better still, a virgin queen? I must confess that I have taken still greater trouble in superseding several queens, caging in the hive a laying young queen taken from a nucleus with the candy of the cage covered so the bees could not get at it, and two days later killing the old queen and leaving the candy so the bees could eat it and release the queen in the cage. This is the plan of introducing advocated by Emerson T. Abbott.

A private word shows a tendency to regret having written about bees. Please don' cherish thoughts of that kind. I don't believe others are so different from myself, and I have always enjoyed seeing what you have written.

Taking Off Honey—Bee-Keeping as a Business

1. How early is it safe to take off comb honey that contains no bee-bread, and pack it away in shipping-cases?

2. I have 91 colonies with from 2000 to 3000 pounds of comb honey. This has been a good year, and if I had been prepared for the work I would have had a much larger yield. But I teach school 9 months in the year, 30 miles from my bees, so you will understand that my vacation is a busy one. I am thinking very strongly of going into the bee-business and dropping school work.

The American Bee Journal is a fine paper and full of valuable information. IOWA.

ANSWERS.—1. To get the best price for comb honey it is well to take it off as soon as it is sealed, because it is whiter then, and the market demands the whitest combs. If left on longer it will be better to the taste in all probability, but the comb will not be so white.

2. Don't think of depending upon bees alone till you have enough money ahead to tide you over one or more years of failure.

A Beginner's Experiences

1. I am a beginner, having started last year with 4 colonies, and last spring I bought 2 more colonies, with the expectation of getting 6 new swarms. Three swarms issued from them, but 2 of them died shortly after they were hived. The weather was cloudy and rainy. Do you think they should have been fed? I did give them syrup a couple of times.

2. I found some eggs in one of the swarms that died, and am sending them to you, and would like to have you tell me what kind of eggs they are. Are they moth eggs?

3. We had very nice weather last spring, and honey began to come in early. One colony had very nearly one super full of honey, but it was not quite all capped over, so to make room for the workers I put an empty super on top of this one. About a week later I looked at it again, but it was not yet completely capped, so I left it for another week, and when I again opened the hive I found that every bit of the honey had been taken from the combs. What became of that honey? The last week has been a little cloudy, but there has been occasionally clear weather, so that the bees could fly out, and they seemed to be doing good work.

I suppose I should have put the empty super under the full super, but I did that last year and the bees carried all the honey down into the empty super, and of course lost a good deal of time. This year I put the empty super on top, and lost all the honey.

4. I had one colony that swarmed 3 times. The bees would settle, and before I could hive them they would go back into the old hive. They did this 3 times. What was the matter with them? That was a month ago, and they have not swarmed since.

5. I never clipped a queen yet. In fact, I have never been able to find the queen in any of my colonies, though I have looked many times. The bees all look alike to me. OREGON.

ANSWERS.—1. Yes, if weather is cloudy and rainy immediately after a swarm is hived, it should be fed. When they have used up the honey they carried with them in their sacs, the bees have no stores in the hive to fall back upon, and if not fed must starve.

2. As nearly as I can make out, after the specimen has been crushed in the mail, what you send is the egg of the cockroach, dark brown or black, and larger many times than the egg of the moth, which is white, and round as a marble.

3. Although it seems pretty rapid work for the bees to carry all the honey out of the super in 2 weeks' time, there seems no other way to account for it. The honey-flow must have stopped, and the bees carried the honey down into the brood-chamber. If the honey-flow stopped long enough, the bees would carry the honey down, no matter whether the empty super was under or over the full one.

4. Some would say they went with the queen on her wedding-trip, but Mr Doolittle says bees don't do that. It is possible that the queen was not able to fly with the swarm, and the swarm would then go back into the hive. The queen crawled back into the hive the first and second time, but the third time she was lost, and then the swarm did not go again. The usual thing would be for the bees to swarm again when the first virgin queen issued from her cell; but the stoppage of the honey-flow at that time prevented the swarming.

5. If you persevere you will undoubtedly succeed in finding a queen, and having found one it will be easier to find others. Look for a bee larger than the workers, with wings that look too short for her size.

Why No Honey Coming In?

In this locality we have had no honey so far, and almost no swarming. There has been plenty of white clover and some other bloom. but absolutely no honey, while last year all supers were full by July 15, and there was free swarming. There is no disease. The bees simply stay in the supers and don't work, and but few bees are to be seen on the flowers. What is the trouble? KANSAS.

ANSWER.—I don't know. I only know that sometimes there is abundance of white clover in bloom and bees can get nothing from it, and at other times when no bloom is to be seen the bees fairly roll in the nectar. Some have said it was owing to electrical conditions.

Bees Tearing Down Queen-Cells

I had one colony queenless and gave them a frame of brood. The third day after, they had 4 queen-cells started. The next time I looked they were capped. When they had been capped about a week I looked into the hive again, intending to cut them out, but found that the bees had torn them down before it was time for them to hatch out. I also found that 2 artificial swarms with queen-cells had done the same thing. I gave one of them another frame of brood. What is the matter with these colonies? **Wisconsin.**

Answer.—The probability is that a young queen had emerged from her cell. Her first care would be to see that all rivals were out of the way. Possibly you may say that you are sure that could not have been the case, for you looked the combs over very, very carefully, and every queen-cell was torn open at the side, the end of the cell being entire, showing that no queen could have emerged from it. In that case a virgin from elsewhere may have entered the hive. Oftener than you might suppose a virgin or a laying queen enters some hive other than her own. Sometimes, however, bees take a notion to destroy cells with no apparent reason for it.

Italian Bees Practically Moth-Proof

What bees, if any, will keep moths out of hives? What bees are *best* to keep moths out? **Arkansas.**

Answer.—No bees will succeed perfectly in keeping the moth entirely out of the hives. Any bees will succeed to a large measure, if colonies are kept strong. Itailians are very much better than blacks. Even a nucleus of Italians will defend themselves quite well against the moth. Not a thought need be given to any danger from moths in strong colonies of Italians with laying queens.

A Queen Experience

A colony that swarmed July 19 was put on a new stand and given a virgin queen, which the bees apparently liberated July 20. She immediately (I suppose) tore out all the queen-cells. July 21 the hive was opened, the cage removed, and the frames put in order. Twenty minutes afterward the queen was dead outside the hive. Was the queen accepted for a time, that is, long enough to destroy the queen-cells, then killed by the bees when the hive was opened? All of these bees were afterwards run through perforated zinc, and given brood in all stages, but no queen-cells were started, nor can I find any signs of laying workers. What is the matter? Would you try to reduce such a colony? **Indiana.**

Answer.—Hard to tell just what was the matter. The supposition that the virgin you gave was accepted, allowed to destroy the cells, and then killed by the bees within 20 minutes after you opened the hive is hardly tenable. Left to themselves, it is very unlikely that the bees would turn upon the queen after she had destroyed the queen-cells. If your opening the hive made the bees attack the queen, they would be a good deal longer than 20 minutes in killing her, for she would be killed by balling, which probybly means starving to death. It is possible that you might accidentally have killed her yourself. That the bees should have been sifted through an excluder so as to exclude any queen, and then should refuse to start queen-cells, is at least very unusual. It is possible that there is a queen in the hive, however. Virgin queens are up to tricks, and one of their tricks is to enter some hive other than their own. Just as soon as you got through sifting, and had turned your back, a virgin may have entered from elsewhere.

If you find no eggs present by the time the queen, (if they have a queen), is 2 weeks old, you have your choice either to break up the colony or to give it a queen. In the meantime, if you desire to keep the colony going, give it frames of unsealed brood and eggs from elsewhere, to keep up its spirits and its strength. It would do no harm also to give a queen-cell, which will be destroyed if anything in the shape of a queen is present.

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Reports and Experiences

Poor Honey Prospects

The honey prospect for Grant and Crawford counties is very poor this year, owing wholly to the bad weather. It has been mostly rainy, cloudy, and cold. It has rained every day for 9 days up to to-day, and it threatens now. Not all the time, but from one to four showers a day, some of them very hard ones. It is impossible to make hay or do any farm work. We have about one-third of a usual basswood bloom, and it is open now.

The season is far advanced, the honey season is almost over, and our hives are not full—yea, they lack a good deal of it. May the American Bee Journal still come, and we will hope for a better crop next year.

Grant Co., Wis., July 8. L. G. Blair.

Putting Weak Colonies Over Strong Ones

On page 570, in referring to Mr. Bevins' loss of queens when he put 2 weak colonies over at many strong ones, Mr. Hasty says, "The scheme is important enough to justify more reports, large and small." Here is a small one:

Early in April 9 colonies of a little less than medium strength were put over as many stronger ones. For an experiment 6 of the 9 pairs were left in that way till the middle of June, working peaceably in the same supers above the upper brood-nest, and each queen doing her full duty. The other 3 pairs were taken down at the opening of clover, and each pair put into an tenement hive, wide enough to give each queen 5 Langstroth frames on her own side of a bee-tight division board, and covered with a zinc-excluder. They have not only gone through the early harvest, but through a *three weeks' dearth*, and are still occupying the supers in common harmoniously. I consider that in this report 2 things should be noted which may amount to conditions: First, the bees used were pure 3-banded Italians, and Second, The upper colonies were strong enough to cover fairly well 3 Langstroth combs. I could not be confident of success with hybrids, and should expect a pint of dysentery-stricken bees to lose their queen regardless of purity or race. It may be well to say that the 6 pairs worked one above the other were on frames $5\frac{2}{8}$ inches deep, and the 3 worked in tenement hives are on Langstroth frames. E. W. Diefendorf.

Cooper Co., Mo., Aug. 12.

"Honey, Honey Everywhere"

I never could see much difference in the honey-flow one year with another in this vicinity during the past 16 or 17 years. Every year seemed to be about the same. Some years the fall flow would be good and the spring flow light. Other years the spring flow would be the better. But this year is an exception right through.

I started the season with 271 colonies and did not have over 30 swarms. The fact of it is the bees did not have time to swarm. The season started with a little robbing among themselves, and they cleaned out a few of the neighbors' hives. Then fruit-bloom started, and I noticed that the bees were humming quite loudly. I got the surplus boxes on nearly all, and the fruit-bloom lasted about 2 weeks. By this time the most of the colonies had their supers finished and one colony had 2 completely finished. Then the raspberry and white clover flow started. I run out of sections as I wasn't expecting such a flow, but I have a horse-power machine for making hives and I cut out chunk-honey frames for the surplus boxes. I cut out pieces $1\frac{1}{8}$ inches wide, and just so they would drop inside of the end-bars of the section-holders, and tacked a piece of tin about one inch square on each end to keep them from dropping down, the tin resting on top of the end-blocks of the section-holders. I fastened the foundation on these top-bars by nailing a little strip right down on the edge of the foundation.

The flow seemed to get better all the time. The only trouble was to give the bees room enough, and to get the honey off the hives. Some of the colonies built comb on the outside and under the bottom-boards. The basswood flow was splendid, and there is a heavy buckwheat flow on now. I have honey piled up everywhere. Butter tubs are full; I bought all the barrels in the 3 nearest towns, and they are full; I built a large tank; the honey-house is piled full of supers clear to the top, and there must be 700 or 800 full supers on the hives that should be taken off at once. There would surely be a drop in the New York market if I shipped all this honey at one time, but there is no danger of that, as it will take me from now until next spring to get it all weighed! I can't sleep nights for dreaming about automobiles, big iron tanks, and bees. Wm. Kernan.

Sullivan Co., Pa., Aug. 9.

CONVENTION NOTICE.

National.—The International Fair is to be held in San Antonio, Tex., Oct. 21 to Nov. 1. When this Fair is in progress there are very low rates in force on the railroads out for 600 or 700 miles. Then there are harvest excursions from the North on the 2d and 4th Tuesdays of the month. The 4th Tuesday in October comes on the 24th. Considering these facts, it has been decided to select Saturday, Oct. 28, as bee-keepers' day at the Fair. This will give ample time for members from the North to reach the city by starting the 24th. The regular sessions of the convention will begin Monday, Oct. 30, *and continue three days.*

The headquarters of the National Association will be at the Bexar Hotel (pronounced Baer, long sound of a), corner of Houston and Jefferson Sts., and rates are only $1.00 a day, and up. The convention will be held at Elks' Hall, 125 W. Commerce St., only two blocks from the Bexar Hotel.

Flint, Mich. W. Z. Hutchinson, *Sec.*

If you want the Bee-Book
That covers the whole Apicultural Field more completely than any other published,
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Liberal Discounts to the Trade.

Langstroth on the Honey-Bee
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This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.20, or club it with the American Bee Journal for one year—both for $2.00; or, we will mail it as a premium for sending us **THREE NEW** subscribers to the Bee Journal for one year, with $3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

Tennessee Queens

Owing to the great demand for my TENNESSEE QUEENS for several seasons, and the quantity of standing orders from old customers, I decided not to advertise until my books were cleared of orders, and thus avoid disappointing customers.

I am now ready to fill orders by **RETURN MAIL.** Breeders used: Imported dark leather-colored Italian; my selections from light imported Italian; Moore's long-tongue; golden; Carniolan (mated to Carniolan drones in distant yard, and to Italian drones); imported Caucasian (lately received, mated for the present to Carniolan and Italian drones).

Prices until Oct. 1.		After Oct. 1.		Tested—	
Untested 12 for	$6.00	Untested 12 for	$7.50	Each	$1.50
" 6 for	3.25	" 6 for	4.00	Breeders—	
" 1 for	.60	" 1 for	.75	Each	3.00

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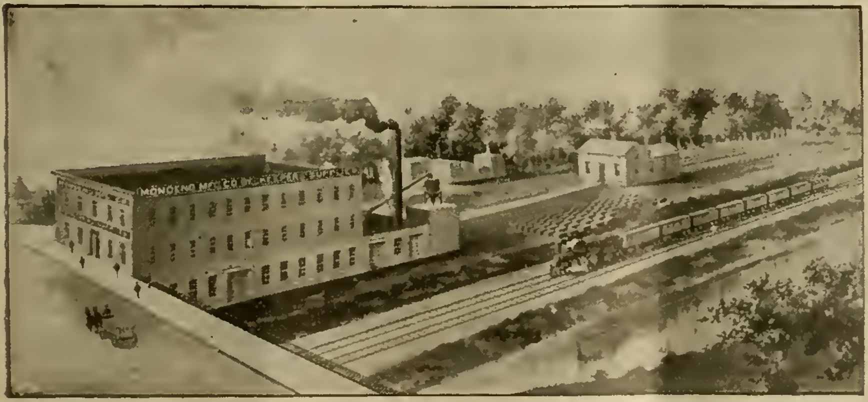

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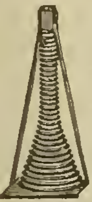

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Untested	$ .75	$ 4.00	$ 7.00
Tested (or War. Tested)	1.25	7.00	13.00
Breeders	5.00		
2-frame Nuclei (no Queen)	2.00	11.00	22.00

When Queens are wanted with Nuclei add price of any Queen wanted. We guarantee safe arrival of all Queens and Nuclei. Our breeders may be returned after 30 days, if satisfaction is not given. Cash must come with all orders. Orders are booked and filled in rotation.

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The STANDARD-BRED kind. Untested, 75 cents each; 3 for $2.10; or 6 for $4.00. They give satisfaction. Or the American Bee Journal for a year and a Queen for $1.50. Here are some unsolicited testimonials from those who have had our Queens:

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After importing queens for 15 years, you have sent me the best. She keeps 9½ Langstroth frames fully occupied to date, and although I kept the hive well contracted, to force them to swarm, they have never built a queen-cell, and will put up 100 pounds of honey if the flow lasts this week. CHAS. MITCHELL.
Ontario, Canada, July 22, 1905.

GEORGE W. YORK & Co.
The two queens received of you some time ago are fine. They are good breeders, and the workers are showing up fine. I introduced them among black bees, and the bees are nearly yellow now and are doing good work. A. W. SWAN.
Nemaha Co., Kans., July 15, 1905.

GEORGE W. YORK & Co.
The queen I bought of you has proven a good one, and has given me some of my best colonies. N. P. OGLESBY.
Washington Co., Va., July 22, 1905.

GEORGE W. YORK & Co.
The queen received of you a few days ago came through O. K., and I want to say she is a beauty. I immediately introduced her into a colony which had been queenless for 20 days. She was accepted by them, and has gone to work nicely. I am highly pleased with her and your promptness in filling my order. My father, who is an old bee-keeper, pronounced her very fine. You will hear from me again when I am in need of something in the bee line. E. E. McCOLM.
Marion Co., Ill., July 13, 1905.

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2. Sending your own name with $1.00 for the Bee Journal will not entitle **you** to a Queen as a premium. The sender must be already a paid-in-advance subscriber as above, and the new subscriber must be a **NEW** subscriber; which means, further, that the new subscriber has never had the Bee Journal regularly, or at least not for a whole year previous, to his name being sent in as a new one; and, also, the new subscriber must not be a member of the same family where the Bee Journal is already being taken.

We think we have made the foregoing sufficiently plain so that no error need be made. Our Premium Queens are too valuable to throw away—they must be **earned** in a legitimate way. They are worth working for.

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Tin 4-in. Smoke Engine	3½-inch	3-inch	2½-inch	2-inch Wonder
$1.50.	$1.10.	$1.00.	90c.	65c—per mail.

Sent on receipt of price per mail.

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OTISVILLE, PA., Jan. 18, 1904.
Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. FRED FODNER.

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We can ship by **return freight** at the following prices:

1-lb. Jars with corks—1 case of 21 doz. for $5 50; 3 cases, $15.50.

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If so, we can fill your order with the best Queens that money can buy. Try our strain of 3-band Italians; they will not disappoint you with empty supers. Untested Queens, 75 cents; $8 per doz. Tested Queens, $1 each. Send for circular. J. W. K. SHAW & CO.
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Bees, Queens and Nuclei

Choice home-bred and imported stock. All queens reared in full colonies.

One untested queen..... $ .65
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All grades ready to send by return mail.

Safe arrival guaranteed. For prices on quantities and description of each grade of Queens, send for free price-list. 100 or 200 lbs. of Brood Foundation. Send for sample and prices.

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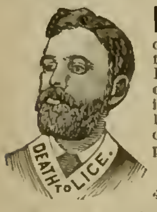
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on poultry amounts to many times the cost of **Lambert's Death to Lice**—the sure preventive. Loss can be saved and profit made by its use. Frees sitting hens from lice without harming eggs or chicks. A trial 10c box will prove it. 100 oz., by express, $1.00.

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NEW COMB HONEY-CROP OF 1905

We believe it would pay those having it in car lots or otherwise to write us. Give us your lowest spot cash prices, and fully describe the goods and style of package; when you can ship, etc. We handle more of these goods than any other firm in the U.S. Yours for business,

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Queens Now Ready to Supply by Return Mail

Stock which cannot be excelled. Each variety bred in separate apiaries, from selected mothers; have proven their qualities as GREAT HONEY-GATHERERS.

Golden Italians Have no superior, and few equals. Untested, 75c; 6 for $4.00.

Red Clover Queens Which left all records behind in honey-gathering. Untested, 75c; 6 for $4.

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C. H. W. WEBER CINCINNATI ...OHIO...

Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

Honey and Beeswax

Chicago, Aug. 18.—The demand has absorbed all the offerings of fancy and A No. 1 grades of white comb honey at 14c, while No. 1 has sold at 13@13½c. No call at present for other than the best grade, it really being difficult to place what ordinarily is called No. 1. Extracted, white, 6@7c; amber, light and dark, 5@6c. Beeswax, 28c.
R. A. Burnett & Co.

Albany, N.Y., July 26.—There is some call for honey, new crop, and if here would probably sell for best prices of season, as the general impression is there will be a large crop. White comb honey will start off at 15c to early buyers.
H. R. Wright.

Kansas City, July 20.—New comb honey has made its appearance; fancy white in 24-section cases selling at $2 75 per case; No.1 at $2.50, and good demand. There is no new extracted in as yet, market on old stock being quotable at from 5@6c. Beeswax, 25@28c. C. C. Clemons & Co.

Cincinnati, Aug. 18.—The heavy requests for offers on honey recently, have a tendency to lower the prices. We are striving hard to maintain good prices, by giving our friends more than their honey is worth, to hold up the market. So far we have been successful. Still offer extracted honey as follows; Amber in barrels and cans at 5¾@6½c, respectively. White clover at 7@8½c. We feel that lower prices will prevail in the near future.

Comb honey is coming in quite freely. We quote fancy white comb honey at 12@15c. The arrival of Western car-load shipments of comb honey is anticipated daily, after which the market will be shattered as to prices. Beeswax, 26c. The Fred W. Muth Co.

Denver, June 26.—The demand for both comb and extracted honey is light at present, and there is enough of old stock on hand yet to last until the new crop comes in; the same is selling as follows: No. 1 white comb, per case of 24 sections, $2@$2.20; No. 2, $1.75@$2. White extracted, 6½@7½c per pound. Beeswax, 26c.
The Colo. Honey-Producers' Assn.

New York, Aug. 18.—No new comb honey on the market as yet, and very few inquiries so far. Extracted is in fairly good demand and we quote: California at from 5½@7c per pound, according to quality and quantity. Southern in barrels from 5[illegible]65c per gallon. Beeswax remains steady at 2[illegible]c per pound.
Hildreth & Segelken

Philadelphia, Aug. 7.—Some honey arriving, with prospects of a good crop all through the East, but no call for comb honey during the hot weather, so that prices are not as yet established. Extracted honey arriving freely. We quote as follows: Fancy white, 7@8c; amber, 6@7c. Beeswax, 27c.

We are producers of honey and do not handle on commission. Wm. A. Selser.

Cincinnati, O., Aug. 8.—There is no demand for comb honey on account of the warm weather. Extracted is in usual demand for this season of the year. We quote white clover at 7@8c: amber, in barrels, at 5¼@5½c; in cans, 5¾@6c. Beeswax, 28c. C. H. W. Weber.

San Francisco, Aug. 9.—White comb, 1-lb. sections, 9@10 cents; amber, 7@8c. Extracted, water-white, 5@5¼c; white, 4¾@5c; light amber, 4@4½ cents; amber, 3½@4c; dark amber, 2½@3c. Beeswax, good to choice, light, 27@29c.

The honey market shows little change this week. All dealers have large stocks and all new arrivals show an excellent quality. White honey which has been received in this market is of a very superior quality and is meeting with a fair demand. Prices are being held at the figures quoted, though trading is very light.

FOR SALE

Until further notice, finest quality new crop California Water-White White Sage and Light Amber **HONEY** in 60-lb. tins, 2 in a case; new cans and new cases Write for prices and samples, and state quantity you want.

HILDRETH & SEGELKEN
265 & 267 Greenwich Street, New York, N.Y.

PURE BASSWOOD HONEY

IN 60-POUND CANS

We have a good supply of **Pure Basswood Honey** in 60-lb. cans that we can ship by return freight at these prices: 1 can in a box, at 8 cents a pound; 2 or more cans, boxed, at 7½ cents—all f.o.b. Chicago. Cash with order. Sample, by mail, 8 cents in stamps, to cover package and postage.

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National Bee-Keepers' Convention at San Antonio, Texas,
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THE AMERICAN BEE JOURNAL

45th Year CHICAGO, ILL., AUGUST 31, 1905 No. 35

Part of Apiary of Wm. M. Whitney, of Walworth Co., Wis.

Apiary of S. C. Ford, of Walworth Co., Wis.

Bee and Honey Exhibit at the Midsummer Fair, held at Lake Geneva, Wis., July 14 and 15, 1905.

Part of Apiary of J. J. Measer, of Reno Co., Kan.

(See page 614.)

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY
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IMPORTANT NOTICES

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec05" on your label shows that it is paid to the end of December, 1905.

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Objects of the Association

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00

General Manager and Treasurer—
N. E. FRANCE, Platteville, Wis.

☞ If more convenient, Dues may be sent to the publishers of the American Bee Journal.

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(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

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1. Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.
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334 Dearborn St., CHICAGO, ILL.

Italian Queen-Bee Free as a Premium

To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us ONE NEW subscription with $1.00 for the Bee Journal a year. Now is the time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.

HONEY-JARS.

For a limited time we offer No. 25 Honey-Jars, porcelain cover, metal screw cap, holding one pound of honey net, one gross in case complete in 5-gross lots, $4.00 per gross; less quantities, $4.50 per gross, f.o.b. New York. If you want to secure some, let us know at once.

HILDRETH & SEGELKEN,
265 & 267 GREENWICH ST., NEW YORK, N. Y.
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Within a hundred miles of me are over ¾ of the bee-keepers of Michigan. I am on the Pere Marquette R.R., which completely covers this region. Root's Goods, Factory Prices, Prompt Service, Low Freight. Send for Catalog.

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Hoosier Strain Italian Queen-Bees by Return Mail

Untested Queen	$ .75	Select Breeding Queen	$5.00
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Dittmer's Foundation is the Best.

Send for Catalog, Samples and Discounts, and judge for yourself. 1904 output, 50 percent increase over 1903.

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Moore's Strain of Italians

Is greater this season than ever. Why? Because his FAMOUS LONG-TONGUED RED-CLOVER STOCK has won a world-wide reputation for honey-gathering, hardiness, and gentleness. They were working so thick on a field of red clover at haying-time that the man who cut it was afraid to drive his horses into it to mow it. Their long tongues enable them to secure nectar beyond the reach of short-tongued bees.

Untested Queens, 75c each; six, $4; dozen, $7.50. Select Untested, $1 each; six, $5; dozen, $9. Safe arrival and satisfaction guaranteed. Descriptive circular free.

Address, J. P. MOORE, Rt. 1, Morgan, Pendleton Co., Ky.

P. S.—I am now filling orders BY RETURN MAIL. 29Dtf

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Lewis' Shipping-Cases Sections, and a full line of Bee-Supplies

BY RETURN FREIGHT OR EXPRESS. Send to

H. M. ARND, Mgr.
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(5 short blocks north of the C. & N. W. Ry. Passenger Station, using the Wells St. Cable Line from center of city to Ontario St.)
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By Return Mail. Safe Arrival Guaranteed.

PRICES.	ONE	SIX	TWELVE
Untested	$0.75	$4.00	$7.50
Select Untested	1.00	5.00	9.00
Tested	1.50	8.00	15.00
Select Tested	2.00	10.00	18.00

Select Breeders, each $3.00
Two-frame Nucleus and Red Clover Queen 3.00

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WE SELL ROOT'S GOODS IN MICHIGAN
Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.

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VIRGINIA QUEENS Italian Queens secured by a cross, and years of careful selection from red-clover queens and superior stock obtained from W. Z. Hutchinson. Untested queens, 75c; after June 15, 60c; tested queens, $1.00; after June 15, 75c; selected tested queens, $1 25; after June 15, $1.00. Write postal card for circular. CHAS. KOEPPEN,
17A26t FREDERICKSBURG, VA.

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We carry a large stock and greatest variety of everything needed in the Apiary, assuring best goods at lowest prices, and prompt shipments. We want every bee-keeper to have our **Free Illustrated Catalog**, and read description of Alternating Hives, Massie Hives, etc. **Write at once for Catalog**, either English or German language.

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FINE QUEENS

By Return Mail. From my 3 and 5 banded long-tongued Italians. Tested, $1; warranted tested, 75c; untested, 60c; no disease. I guarantee all Queens perfect, to arrive safely, and to give reasonable satisfaction. I have pleased others and can please you. May I ask for a trial order?

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23Atf R. F. D. No. 1. MILO, MO.

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We have secured the services of one of the best Queen specialists in the U. S. Over 20 years' experience rearing Queens. Our Yard is stocked with select breeders from the best yards in America, and can send Queens by return mail.

Prices to Sept. 1, 1905:

Untested Queens	$ .75
Select Untested Queens	1.00
Tested Queens	1.50
Select Tested Queens	2.50

GRIGGS BROS.
521 Monroe Street,
TOLEDO, - OHIO.

Please mention Bee Journal when writing.

SEPTEMBER SPECIAL

Cash Discount for Early Orders

We can not remember a year when we were not crowded with orders through the spring months, and somewhat behind, some years more than others. In order to divert some of this trade to the fall and winter months, we have offered inducements in the way of an early-order cash discount. This year we will be more liberal than ever before in the amount of discount allowed. For some months the price of some of the materials used has been a little lower, and we have stocked up heavily, and propose giving you the advantage of the saving in price. The abundant farm crops throughout the country are stimulating trade in almost all lines, and prices are already stiffening. The discounts which we propose to offer for early cash orders are as follows:

For cash orders before	Oct. 1	10	percent.
" "	Nov. 1	9	"
" "	Dec. 1	8	"
" "	Jan. 1	7	"
" "	Feb. 1	6	"
" "	March 1	4	"
" "	April 1	2	"

You will notice that, after January, the discount drops 2 percent a month; and if we find that advancing prices of materials do not warrant the larger discount, we reserve the right to reduce the amount of discount at any time. Your safest plan is, therefore, to order at once.

This discount is only for cash before the dates named, and is intended to apply to hives, sections, frames, foundation, extractors, smokers, shipping-cases, cartons, and other miscellaneous bee-keepers' supplies. It will not apply on orders for the following articles exclusively; but where these form no more than about 10 percent of the whole orders, the discount may be taken from the entire bill: Tinned wire, paint, Bingham smokers, Porter bee-escape, glass and tin honey-packages, scales, bees and queens, bee books and papers, labels and other printed matter; bushel boxes, seeds, and other specialties not listed in our general catalog.

Beeswax and Comb Foundation

To compensate for the large early order cash discount we propose to increase the trade price of wax; and until further notice we will pay 26 cts. cash, or 30 cts. in trade, for average wax delivered here or at our branches. When you take trade at 30 cts. a pound you will not be entitled to the early-order discount on the supplies.

The price of comb foundation was reduced Aug. 1 two cents a pound, and the revised price stands as follows:

GRADE.	Size, and sheets per pound.		In lots of — 1 lb.	5	10	25	50
Medium Brood	7¾x16⅞	7 to 8	55	53	51	49	48
Light Brood	7¾x16⅞	9 to 10	57	55	53	51	50
Thin Super	3⅞x15½	28	62	60	58	56	55
Extra Thin	3⅞x15½	32	65	63	61	59	58

The early-order cash discount applies to the reduced price of foundation, making a total net reduction of 7 to 8 cts. a pound for September orders. We recommend that shipment of foundation be avoided in extreme cold weather, and to that end it would be well to get in your supply in the fall. Use your leisure time in winter to nail and paint your hives, put up sections, and prepare other articles ready for the spring rush.

Extra-Long Bee-Gloves

Having made arrangements for our supply of gloves from a factory making a specialty of their manufacture, we save enough in the cost to enable us to offer them either with or without fingers at 35 cts. a pair; by mail, 42 cts.

No-Drip Shipping-Cases

Don't allow your Comb Honey to be sold at low prices on account of poor Shipping-Cases. Put your crop into Root's **No-Drip Cases** and it will reach the market in perfect condition, thus bringing satisfactory returns. Our Cases are made of selected basswood, with 2 or 3 inch glass front, which shows off the honey to the very best advantage. Below is a condensed price-list. Complete prices and particulars are found in our general catalog.

Shipping-Cases. Name and Size of Case.	Nailed each.	Price complete including 3-in. glass one side, nails and paper, in flat. 1	10	100	With 2 in glass instead of 3—per 100.	Without the glass, per 100.
12-in. 4-row for 4¼ section	30	25	2 00	$18 00	$17 00	$16 00
10-in. 4-row " "	30	25	2 00	17 00	16 00	15 00
12-in. 2-row " "	20	15	1 30	11 00	10 50	10 00
10-in. 2-row " "	20	15	1 20	10 50	10 00	9 50
16-in. 2-row " "	25	18	1 50	12 00	11 50	11 00
8-in. 3-row " "	20	15	1 30	11 50	10 75	10 00
6¼-in. 3-row " "	20	15	1 20	11 00	10 25	9 50
7⅛-in. 4-row for 4x5 "	30	22	1 80	16 00		14 00
7⅛-in. 3-row " "	25	20	1 40	12 00		10 50
9¼-in. 4-row for 3⅝x5 "	30	22	1 80	16 00		14 00
6¼-in. 3-row " "	25	20	1 40	11 50		10 00

The Simplex Jar

The handsomest glass package on the market. It's a package you need not be ashamed of, and will find its way beside the finest of the grocery shelves. Create a demand for your honey.

This is a new jar with glass screw-top and rubber gasket fitted to the taper screw on jar, which seals absolutely air-tight. Put up in re-shipping cases of 2 dozen jars each, with corrugated protectors.

Price $1.10 per case; 6 cases @ $1.05; 20 cases or more @ $1.00.

5-Gallon Square Cans

The above cut shows the favorite package for shipping extracted honey. There is no shrinkage and consequent leaking; no taint to the honey from wood, as is so frequently the case with barrels and kegs. The cans, being made square, economize space, and are easily boxed. They are used exclusively in the far West. Take 4th class freight-rate.

PRICE LIST OF SQUARE CANS.

No. in a box.	Capacity of each can in gallons,	in honey.	Price of 1 box.	10 bxs.	Wt. of 1 box.
1	5-gal. can boxed	60 lbs.	$ 55	$ 5 00	10 lbs.
2	5-gal. "	60 "	85	8 00	15 "
10	1-gal. "	12 "	1 50	14 00	20 "
12	½-gal. "	6 "	1 50	14 00	20 "
24	¼-gal. "	3 "	2 40	23 00	25 "
100	1-gal. "	12 "	11 00	105 00	110 "
100	½-gal. "	6 "	9 00	85 00	80 "
100	¼-gal. "	3 "	7 00	65 00	60 "

Porter Bee-Escape

The great labor-saver. No well-regulated apiary can afford to be without it more than a smoker.

Price 20c each; $2.25 per dozen, prepaid.

Price with board, 35c; $3.20 for 10, not postpaid.

The A. I. Root Company, MEDINA, OHIO

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AMERICAN BEE JOURNAL

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GEORGE W. YORK, Editor
CHICAGO, ILL., AUGUST 31, 1905
Vol. XLV—No. 35

Editorial Notes and Comments

Reserve Combs of Sealed Honey

Are you planning to have a goodly number of combs of sealed honey ready to give to needy colonies next spring? Perhaps it would be better not to speak of giving them to needy colonies, but rather to colonies that can take them. A colony may have enough honey to supply its wants up to the time the white-honey harvest begins, and the beginner may think, "Well, that is all that is needed."

There may be a good profit, however, in giving combs of sealed honey, even if those combs are not needed to prevent starvation. The dark fall honey is not worth as much on the market as the earlier light honey, and, indeed, in some cases it is hardly marketable. But before any of the white honey is stored in supers, the bees will fill the vacancy in the brood-chamber. Now, suppose you have sealed combs of dark honey to fill that vacancy. Every pound of dark honey you thus put in the brood-chamber means a pound more of light honey in the super, practically making that dark honey of the same value as the light. See the point? If you do, make preparations accordingly.

An Imported Cyprian Queen

Dr. C. C. Miller sends us the following report on a Cyprian queen with which he has been experimenting:

> Last year I obtained from the Government Apicultural Investigator, Prof. Frank Benton, an Imported Cyprian queen. By the close of the season she was well established in a full colony, ready for business the past spring. She did good work at laying; so far as I could see, as good work as if she had not done so much traveling. Her workers are as beautiful as Italians—I'm not sure one would tell them from Italians. I was expecting them to be very cross, but they showed so little vindictiveness that I felt somewhat aggrieved at having been imposed upon by having been given a Cyprian queen without the proper quota of temper.
>
> In storing, the colony fell behind the average in the apiary. I'm not sure whether that should be counted against these Cyprian bees. It is well known that a queen that has been through the mails may do very poor work, while her royal offspring will show excellent results. The ill effects of travel, however, while making the queen do poorer work at laying, ought hardly to affect the character of the worker offspring, and the colony in this case being of average strength ought, one would think, to have done average work. They were not allowed to continue storing the entire season, and it is barely possible that they might have done better later on.
>
> One fault was so grievous that it condemned them utterly for comb-honey production: They filled the honey so close to the cappings that they made watery-looking sections.
>
> June 20 they were found to have started queen-cells, and in that they showed very plainly that they were distinctly different from the other bees in the apiary, for such a smattering of queen-cells and queen-cell cups I never saw before. It seemed a good thing to turn this peculiarity to account; so they were set to work at the business of starting queen-cells, and the result is shown on the first-cover page of this Journal for Aug. 3—119 cells at a sitting.
>
> Thus made queenless for cell-rearing, they redeemed themselves as to the matter of temper, and I had no further occasion to accuse Prof. Benton of having defrauded me out of my proper rights. They were vicious enough to give full satisfaction to any one desiring viciousness. They were also more prompt to start laying workers than any other bees I had ever known.
>
> Just so far as could be judged from this one queen and her progeny, one would say that Cyprians, when not queenless, are hardly so vicious as generally painted, and that they should be used for the production of extracted honey only. And if one who is not an expert in the matter of queen-rearing may be allowed to express an opinion, I should say that if I were in that business I should be willing to pay a high price for one or more pure Cyprian queens, just for the sake of having queen-cells produced, feeling sure that with Cyprian bees and the right kind of material to give them for working upon, I could get as good cells as could possibly be reared, and with less labor than by Doolittle cups or any other method. C. C. MILLER.
>
> McHenry Co., Ill.

Identification of Plants

Now and again some one finds a plant with which he is not familiar, wonders whether it may not be a honey-plant, and sends it to this office for identification. Usually it is hardly a matter of sufficient general interest to occupy space with a reply. The reader is not interested to know that a plant of which he has never before heard, and which he may never see, is not a honey-plant. If it were a good honey-plant, the matter ought to be somewhat readily decided by watching to see how much attention is given to the plant by the bees. If the bees are seen to be in numbers upon any plant at a time when they are storing, it is safe to say that such a plant is a good honey-plant, for the bees are too good economists to waste their time upon something that yields no returns.

At a time of scarcity, bees may be seen working upon plants which are of little account, because that is better than nothing. That does not prove the value of the plant; the question is, Do they visit the plant in numbers when they are getting plenty of nectar? Neither is it a proof that a plant is without value because no bees are seen upon it in a time of plenty. It only proves that for the time some other plant gives more satisfactory returns. With these principles in mind, any bee-keeper ought to be able to decide without much trouble whether any plant is a good honey-plant *for him.*

It may be further said that such an answer, determined by the bee-keeper himself, is more reliable than an answer sent out from the office of any publication, because what is a good honey-plant in one place may not be such in another. Goldenrod, for example. In some localities it is esteemed as a honey-plant; in others it is worthless.

Poisonous Honey

The following interesting clipping, copied from the London Lancet, has been sent in by Leo. F. Hanegan:

> Poisoning by honey has been known since the days of Xenophon, when it seems to have been fairly common, and has been observed in various parts of the world—Germany, Switzerland, North and South America, India and New Zealand. In the New Zealand Medical Journal for April, Dr. E. D. Aubin has published an important paper on cases of poisoning due to wild honey, which were observed most frequently in Maoris. As the poison evidently is derived from plants visited by the bees, its nature varies in different countries, and so do the symptoms. In New Zealand only wild honey appears to cause poisoning. The symptoms usually followed ingestion of the honey in less than an hour.
>
> Three modes of onset were observed, which Dr. Aubin terms, respectively, gastric, nervous and cerebral.
>
> In the gastric form giddiness and nausea are followed by severe and persistent vomiting, which may last on and off for two days. There is usually some abdominal pain, but this is not, as a rule, a prominent symptom. The mouth feels dry and glazed. Apparently no irritant action is exerted on the bowels, for diarrhea was never observed.

In the second mode of onset Dr. Aubin attributes the symptoms to irritation of the peripheral nerves, which is indicated by tenderness in the muscles; pains, chiefly of a burning character, in the muscles of the arms, the legs, the back, and the abdomen; itching and a feeling of "pins and needles," or numbness in the arms and the legs. Such symptoms are observed in early stages of peripheral neuritis and in poisoning by muscles.

In the third mode of onset cerebral symptoms occur. For example, a Maori who had partaken largely of honey suddenly dropped down in a fit. He became unconscious, and fits recurred at intervals.

Delirium may be the first symptom. In severe cases, as a rule, the gastric, nervous and cerebral symptoms are combined, one set of symptoms predominating. The characteristic symptom of poisoning by honey as observed in New Zealand is the epileptiform fit. This, as stated, may mark the onset or may not occur for an hour or more. It differs in no way from an ordinary epileptic fit, and may be preceded by a cry. The head is jerked to one side with conjugate deviation of the eyes and tonic and clonic spasms occur. Cyanosis and frothing at the mouth are present, and the tongue may be bitten badly. After the fit the patient may be quiet and may sleep, or may be restless and delirious. In severe cases the patient is unconscious between the fits, which usually recur several times. In some cases the convulsions may be more or less continuous, and may result in death. The fits generally cease in less than 24 hours. Slight vaso-motor phenomena are usually present, the face and the skin generally feeling hot and swollen. Urticaria was never observed. The duration of the illness is from a few hours to two days, though nervous symptoms are sometimes complained of for a considerable time afterward.

In fatal cases death usually occurs within 24 hours. The symptoms, no doubt, are due to a poison in the honey, probably of the nature of an alkaloid which affects chiefly, if not wholly, the nervous system. The gastric symptoms, Dr. Aubin thinks, are of cerebral origin—a view which is supported by the absence of signs of intestinal irritation. We may add that in other countries such signs have been observed.

After reading the foregoing one might be inclined to think that poisonous honey is so common that the safe thing would be to let all honey entirely alone. As a matter of fact, poisoning by honey is such a rare thing that probably not one reader in a hundred of this Journal ever knew of such a thing happening in his own neighborhood. Even so dignified a publication as the London Lancet may be a little astray as to its facts when it treads upon unknown ground, and may wander still further astray in making deductions. Note the statement, "In New Zealand only wild honey appears to cause poisoning." That may be accepted as straight goods among the medical fraternity, but hardly among bee-keepers. What difference can there be between wild and tame honey? Will a colony of bees in a hollow tree work upon flowers at all different from those visited by the bees of an apiary in the same vicinity? If so palpable an error can occur upon one point, why may not other errors occur?

Those soldiers of Xenophon are paraded whenever poisonous honey is spoken of; if poisoning by honey is such a common thing, why not let the soldiers of X. rest quietly in their graves and trot out a fresh poison squad?

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National Association Nominations

Secretary Hutchinson has given this notice on nomination of candidates:

> All members of the National are requested to send their votes on a postal card, or by letter, to N. E. France, Platteville, Wis., thereby expressing their choice of candidates to succeed each of the above-mentioned officers. Votes must reach Mr. France by Sept. 20. The two men receiving the highest number of votes for each respective office will be considered the candidates to be voted for at the annual election in November.

"The above mentioned officers" referred to in the foregoing are these:

President, Jas. U. Harris; Vice-President, C. P. Dadant; Secretary, W. Z. Hutchinson; General Manager and Treasurer, N. E. France; Directors, J. M. Hambaugh, C. A. Hatch and Dr. C. C. Miller.

Among others, Mr. Hutchinson suggests C. P. Dadant, of Illinois, for President; Jas. A. Green, of Colorado, for Secretary, and Frank Rauchfuss, of Colorado, for General Manager.

They are all right. While *we* might also present a full "slate," as Mr. H. has done in the Review, we refrain from doing so, as we have been foolishly accused of wanting to "run" the National Association. We are only an humble private in the ranks, and are quite content to have others "run" the National Association.

Miscellaneous News Items

The Western Bee Journal has been sold to Orchard and Farm, a monthly published at San Francisco, and will henceforth be published as an apiarian department of that publication, with Mr. Adelsbach as editor.—Bee-Keepers' Review.

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Lake Geneva Midsummer Fair.—The success of the first Midsummer Fair held at Lake Geneva last year was so great that another was held July 14 and 15 of this year. The prime object last year was to raise money for the Fresh Air Association, but the Fair itself became a matter of such importance that it almost supplanted the first aim. It was again held on the beautiful, shaded grounds of the late L. Z. Leiter, which are not only spacious but splendidly adapted for the purpose, extending to the edge of the lovely Lake which is surrounded by the summer homes of many wealthy Chicagoans. These latter were the principal exhibitors in many of the departments of the Fair. The net proceeds of the Fair held last year were something over $4,000. It was our privilege to be present as judge of the apiarian exhibits both years. We show this week a picture of the bee and honey exhibits made this year. Those winning the premium ribbons are as follows:

One or more cases section comb honey, not less than 24 sections—1st, or blue ribbon, Mrs. Henry Buell; 2d, or red ribbon, S. C. Ford.

Extracted honey, not less than 10 pounds—blue, Miss E. Rumsey; red, Wm. M. Whitney.

Beeswax, not less than 5 pounds—blue, Mrs. Buell; red, Mr. Whitney.

Best exhibit of vinegar made of honey—blue, Mr. Whitney.

One or more cages of Italian queens—blue, Mr. Whitney.

One-frame nucleus, 3-banded Italian bees with their queen—blue, Mr. Whitney; red, Miss Rumsey.

Best general exhibit—blue, Mr. Whitney.

Miss Emily A. Hatch was the superintendent of the apiarian department and took great interest in it. She has 8 colonies of bees, and is getting along nicely with them. The Fair was well attended, and the exhibits in all departments were very interesting and instructive.

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The Kansas State Fair is to be held at Hutchinson, Sept. 18 to 23, inclusive. J. J. Measer, of the same city, is the superintendent of the Apiary Department. The premiums offered on bees, honey, etc., are as follows, and should call out a good display:

	1st	2d	3d
Case of alfalfa comb honey	$ 5	$3	$2
Case of amber comb honey	5	3	2
Display of comb honey	10	5	3
Display of extracted honey	5	3	2
Frame of white comb honey for extracting	4	3	1
Frame of amber comb honey for extracting	4	3	1
Best 5 pounds beeswax	5	3	2
Display of beeswax	10	5	3
One-frame observation glass hive	5	3	2
One-frame 2-story observation glass hive	5	3	2
Display in design of beeswax	5	3	2
Home-made hives, complete	5	3	2
Best display of bee-keepers' supplies	10	5	3
Best arranged apiarian display	10	5	3
Best display of honey-cakes	3	2	1
Best display of pies sweetened with honey	3	2	1
Best display plain pickles in honey-vinegar	3	2	1
Best display of sweet pickles put up with honey and honey-vinegar	3	2	1
Best display of varieties of uses for honey	5	3	2
Grand sweepstakes, largest and most attractive exhibit	10	5	3

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The Apiary of J. J. Measer—or a part of it—is shown on the first page. Mr. M. wrote us as follows when sending the picture:

> I send you a photograph of a part of my apiary, taken the forepart of July, and showing the condition of the bees at that time. We have had no honey coming in up to date, scarcely enough to do the bees for food. Colonies are strong in bees but no bloom to work on, so the bees are loafing on the hives. The web-worm has taken all the bloom from the first and second crops of alfalfa and all wild flowers. During the past 3 or 4 days there has been some work done, as the third crop of alfalfa is now coming into bloom. I think there will be but very little section honey gathered in this part of Kansas this year—probably some from late wild flowers.
>
> Reno Co., Kan., July 17. J. J. MEASER.

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To Foreign Subscribers.—We wish to repeat a notice that we have given several times before. It is this: None of our special offers made in the American Bee Journal, or anywhere else, apply to foreign subscribers. So whenever we receive a foreign order with remittance we always apply it all on subscription to the American Bee Journal. If our foreign readers would think about it a little, they would quickly see that our special offers would not apply to them, on account of the extra postage to foreign countries. Also, we do not export any queens, except to Canada.

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Maeterlinck's "Life of the Bee."—We have a few copies of this book, price, postpaid, $1.40; or with the American Bee Journal one year—both for $2.00, as long as the books last. It is a cloth-bound book, and has 427 pages.

Biographical

WM. M. WHITNEY

The subject of this sketch is one of the oldest and most earnest readers of the American Bee Journal. At present he resides in Walworth Co., Wis. His life has been a very busy one from his youth, being obliged to make his own way—which isn't the worst thing that can happen to a boy—at about the age of 15. His father owned a farm of moderate size, and reared a large family—9 children—which was no easy task. How his father and mother endured the hardships attendant on making a home in the midst of a primeval forest as they did, is more than he can understand.

Mr. Whitney was born on a farm in the town of Ontario, Wayne Co., N. Y., Sept. 23, 1828; passed through the various vicissitudes attendant upon child-life — chicken-pox, mumps, measles, whooping-cough, scarlet-fever, etc., to say nothing of the ague and chill fever. He survived them all, through the faithful care given him by his mother and father. He attended the common school winters and summers till about 12, when farm-work was followed during the summer-time.

At the age of 15 he went away from home 4 miles in the winter to school at West Walworth Academy, and from there to Macedon, which was an institution of higher grade. He spent several terms at the last institution—in fact, finished his school-days there. He taught school from the time he was 18, more or less, for 10 years; clerked in a dry goods store in Palmyra for a time, and a year in a book-store in Watertown, N. Y.

WM. M. WHITNEY

He married the eldest daughter of Nelson Clark, a farmer of Le Roy, N. Y., at the age of 23. He moved to Illinois in the spring of 1858, and engaged in mercantile business with a cousin of his wife; elected clerk of the Circuit Court of the County of Du Page, Ill., in 1860, and held the office 8 years, and was ex-officio recorder during the same time.

In 1868 he formed a partnership with Isaac Claflin in real estate and loans; was elected to the 27th General Assembly in 1870, which had the remodeling of the statutes to conform to the new constitution that had been passed in 1869, holding 4 sessions in the 2 years; elected member of the State Board of Equalization of Taxes in 1872 for 4 years, representing the first Congressional district; in the Revenue Collector's office in Chicago for a short time, and in 1879 went to the Illinois Eastern Hospital for the Insane at the head of the business department, which position he held for 8 years. Since that time Mr. W. has not been engaged in any important business. He was burned out in the Chicago fire of 1871, that is, all his valuable papers—books, mortgages, notes, abstracts, etc.—entailing a loss of several thousand dollars.

Mr. Whitney's family consisted of his wife and 7 children—6 daughters and one son—of whom only 3 daughters are left. He took up bee-keeping as a pastime, as he had been very much out of health from over-work, anxiety and care. He has found the occupation most pleasant and instructive. His only regret is that he did not commence the study and care of the honey-bee in his younger days.

Mr. Whitney's 3 daughters married physicians, and one daughter is now a practicing physician. While clerk of the circuit court he studied law, and was admitted to the bar by the supreme court, but never practiced the profession.

The picture shown herewith is one taken several years ago, but is a good likeness of Mr. Whitney, we think. He now has some 60 colonies of bees, and has always been very successful as a bee-keeper.

Contributed Special Articles

Something Interesting About Bee-Stings

BY G. M. DOOLITTLE

While at work in the apiary a few days ago, a bee-keeper of a few years' experience came in, and at about the same time a bee stung me on the hand, when, with a quick motion, the sting was rubbed out of the hand by striking the hand on my pants, with an upward drawing motion, thus getting the sting out so quickly that very little poison entered the wound. This part of getting the sting out was lost to my visitor through his curiosity regarding whether the bee would soon die from the effect of losing its sting. He was sure that every bee which stung a person or anything else, so that it lost its sting, must of necessity soon die, and said that he had been told by an old bee-keeper that such was the case.

At about this time the bee returned to another attack on both him and me, the white, thread-like substance where it had parted from the sting showing that this bee, which was so intent on stinging us (if it could), was the self-same bee which had stung me only a few moments before. I called his attention to the matter of this being the same bee, and told him that it did not look as if the bee was just ready to die from losing its sting, by the way it was still trying to sting us. He said that did look a little strange, but he still seemed to be sure that the bee would soon die.

Up to within the past 10 or 15 years most persons believed as did my visitor, arguing that in leaving the sting, as the honey-bee nearly always does in stinging an animal, a part of the intestines was left with the sting—poison sac, etc.—which would surely cause the bee to die. This seemed so reasonable that for many years I believed that this prevailing idea was true, till one day after a bee had stung me, leaving its sting, it came to the attack again and again, with all the fury and vengeance possible for a bee to work itself up to, getting in my hair and singing away as only an angry bee can sing, which will make the cold chills run up and down the back of any but the most hardened individual.

As this bee apparently had no thought of dying, it was caught and caged with three or four others and kept a week or so to see what would become of the matter. At the end of the week it was apparently just as lively and healthy as any of the rest, when all the bees were set at liberty.

At another time, in putting up queens to send away, in catching the escort bees which were to go with the queen, one of them stung me on the end of the finger, leaving its sting, when it immediately ran into the cage. As I did not wish to remove all the bees and queen to get it out I let it go, soon after which the thought came to me that here would be a chance to test the theory of the death of the bee from losing its sting, as this queen was going a journey which would take eight or ten days.

Accordingly I wrote to the person to whom they were sent, telling him all about the matter and asking him to take notice particularly when the queen arrived and see if there were any dead bees in the cage. In due time he replied that the queen arrived in splendid shape, and that there was not a single dead bee in the cage.

Several times since then I have tried similar ways to see if such bees as had lost their stings were in any way inconvenienced thereby, and as far as I can tell by means of confining them so as to know that I have the same bee, I can see no difference between such bees and those which have their stings, as to length of life. Whether they gather honey or not, or whether they are allowed to live in the hive without their weapon of defense is something which would be next to, if not quite, impossible to tell, for in this case we have no means of keeping track of an individual bee.

As bees are not tolerated in the hive, which are in any way imperfect, it might not be unreasonable to suppose that the perfect ones might drive off such an one which had lost its sting, as being incapable of defense were the hive attacked.

That it was not the design of nature that the bees should always lose their stings when defending their hives is manifest where bees repel robbers to the extent of hundreds and thousands of slaughtered, when in such cases not one bee in one thousand loses its sting, but keeps it so that it can slaughter bee after bee till the attacking party is repelled, or they lose their lives in the combat. At times they do lose their stings in other bees, but not often.

Before closing I wish to say a word about getting the sting out of the flesh as soon as possible. We have been told not to pick the sting out with the thumb and fingers, for in so doing the poison from the sac, attached to the sting, would be squeezed into the wound; but by using a knife or something of that kind the sting could be gotten out without injecting the poison into the flesh. This sounds pretty, but my experience is that while you are working to get the knife, the contraction of the poison-sac would pump in far more poison than the squeezing would do. The knife is better, if you have it at hand at the instant wanted; but if not, don't wait. Get the sting out *at once* in some way.

My way is to rub it out by a drawing motion against the clothing, if on the hands, and by a sliding motion of the hand against the sting when on any other part of the body; and if you are quick enough in these motions, the sting can be generally gotten out so quickly that very little pain will be felt. Onondaga Co., N. Y.

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Work in the Apiary for September

BY C. P. DADANT

The honey harvest ends this month. Those who produce extracted honey must expect to extract all the crop before the end of the month. If the honey is thick and ripe shortly after it is harvested, as is usually the case with Spanish-needle honey, it is not necessary to wait until the last of the crop, which generally ends with the first frost, to harvest the honey. If the hives have two or more supers, all may be taken except those that are entirely unsealed and show evidence of being freshly harvested. If we have only a few combs left on the hives, at the end of the crop, the work of finishing the extracting will be short and but little chance will be given for robbing. We usually leave the empty extracting combs on the hives until October, as the bees protect them against the moths during the last warm days, better than we could do it ourselves.

The producer of comb honey must remove all sealed sections as fast as possible after they are finished to avoid the travel-stains by the bees. The fall blossoms and their yellow pollen cause the bees to produce and spread over the combs a quantity of coloring pigments which darken the white combs promptly. Honey that is removed as soon as sealed will show much whiter, even if it is of a deep color, if it is taken off before the bees have had time to stain the white cappings, for beeswax is always white when first produced.

Of course, supers left on until October will be still more stained, by the addition of traces of propolis all over the combs, for just as soon as the harvest ends the bees begin to prepare for cold weather by daubing the inside of the hive with propolis and filling all the crevices with this sticky substance. Some localities are much worse for this production of propolis than others. Trees of lowlands, willows, poplars, cottonwoods, etc., furnish an abundance of this which the bees seem to enjoy crowding into nooks and corners.

Towards the last of the crop the bees would best be crowded a little for room, for if too much space is given they will be building additional new combs and scattering their honey, while it is best to have all the cells finished and sealed if possible. There is no longer any danger of swarming by narrowing the available space to the minimum, in each hive, and we make sure of much better results, securing more finished sections.

Likewise, if we are producing extracted honey, we will find it well to crowd the bees a little for space, so they may be compelled to put enough honey for winter in the brood-combs. Colonies that have bred plentifully and spread through three or four supers are likely to find themselves with too little honey in the brood-chamber for winter if we do not compel them to place some there. However, I would not wish to be understood as giving this as a rule. In cool seasons, pure Italian bees will, on the contrary, crowd their brood-chamber too much, but hybrids or black bees are prone to scatter their crop, and this matter must be watched before the end of the harvest so as to compel them to fill their brood-combs sufficiently for winter. If too much honey has been placed in the brood-combs, it is advisable to extract only that which is unsealed, for unsealed honey is not very good for winter, as it is apt to become watery much more readily than that which is sealed.

The month of September is also quite suitable for the replacing of queens that are too old or that have proven unprolific. At this time queens may be purchased at lowest prices, because breeders rear them more easily and more cheaply during the summer months than in the spring. We have also had good opportunities to become acquainted with the prolificness, or lack of prolificness, of different colonies, and can take the same opportunity of replacing the queens that are becoming too old and are losing. But I would warn the novice to be very careful, for queens that have lost their fecundity are often replaced by the bees themselves before we are aware of it, and we run the risk of destroying a young queen when we are thinking of replacing the old one. The longer I keep bees, the less profitable I think the custom of replacing queens that are supposed to have reached the term of their usefulness.

Small colonies, made by division, late swarms, etc., can be helped very materially during this month by supplying them with an occasional comb of sealed brood and honey. A weak colony, helped twice—two weeks apart—with a comb of brood each time, will often make a good colony for winter, and the powerful colony from which this help has been taken will hardly feel it. Hancock Co., Ill.

Convention Proceedings

Report of the Chicago-Northwestern Bee-Keepers' Convention, held at Chicago, Ill., Nov. 30 and Dec. 1, 1904

(Continued from page 601.)

CASH FOR PROOF OF ADULTERATED COMB HONEY

Mr. Becker—It is a fact that there are many people who believe that there is adulteration both in comb and extracted honey. I sell honey right here in Chicago. I have bought it from Mr. York and from Mr. Dadant. I ship honey to Chicago. They wouldn't under any consideration buy the honey here in Chicago and believe that it actually was pure honey. They have told me so, time and again. I have tested the honey to-day that I shipped here ten years ago, and which has been kept in an open jar. I told them that the honey was too strong. They thought it was delicious. It was pure honey. A few years ago we brought in honey and I told some of the parties here that I would guarantee they would get pure honey here in Chicago, and I told them where to get it. They got some of it. They said, "Oh, that was not pure honey; that was not honey like you sent me." But it was pure. We all know that there is no adulteration in comb honey, but when it comes to extracted honey of course there is sometimes adulteration. There are so many varieties of honey; there is basswood, white clover, alfalfa, Spanish-needle, heartsease, and other varieties of honey, and one does not taste or look like the other, especially sweet clover and basswood. You give them some of your honey and they have been used to white clover or alfalfa, and they just declare up and down, and you cannot make them believe that it is not adulterated honey. I have sold honey in Springfield for the last 20 years, and one traveler there accused me two weeks ago of having a monopoly because he couldn't sell any. I told him I was glad that I had the monopoly, if I had it. But the only way I got that monopoly was by selling them an article that I stood behind. I said, "If this honey isn't pure, and if anybody does not like it, don't argue with them, but tell them to bring it back and give them their money back; it is my honey and I will take it off your hands." And to-day should I go to Springfield I am asked no questions as to its purity. I simply ask, "Do you need any honey?" And they say, "Yes, two, three or four dozen, and as high as a gross." I never buy on the Chicago market. I don't send any honey here. I am right the other way; I take it from Chicago and sell it at other places; and I sell it at home, and I will stand behind my honey, and never sell anything but what I know is pure, genuine honey. If you all do the same thing I think you will have no trouble in selling your honey.

Mr. Dadant—I wish to insist on the necessity of our explaining the comb-honey story wherever we can. We must do it. I have a better opportunity perhaps than any one else of finding out what the general public thinks of the comb-honey story. When I travel I come across business men and we get into conversation. The first thing we ask one another is, "What is your business?" I say, "I have a little factory out here in the country." "What do you make?" "I make comb foundation." "What is that?" "Did you ever hear about comb honey being manufactured?" "Oh yes." "Well, there isn't any such thing. I make the nearest to comb that can be done." "Is that so?" Then comes the explanation. If I have a sample I show him and he is absolutely convinced there is no comb honey manufactured. But when I first meet him, if he knows anything about it he knows comb honey is manufactured and sold! I find very few people that do not believe it until it is explained to them. When I tell them, I know they believe me because there is no reason for me to tell them a story and they understand how the story was gotten up. But this extends to you; it is absolutely necessary to make this matter known widely because there are millions of people who have read that story and believe it simply because they have never been told better.

Mr. Smith—I want to say I have convinced some parties by exhibiting some of the thin foundation and explaining why it was used and how it was used, and that was all there was to it. It dawned on their minds finally that I was right. I think the more we do that, and the more we can explain this thing and talk it the better, because it is the fact, and it is easily demonstrated when we have the evidence, that is, the foundation, and show the people that that is all there is to it. I am like Mr. Becker, I believe in every bee-keeper standing by his honey.

Pres. York—Before Mr. Smith spoke I was wondering whether it would not be a good idea for every bee-keeper to carry a little piece of comb foundation; and I am going to suggest that comb foundation manufacturers get up a little pocket-holder with a piece of foundation in it, and give it to all the bee-keepers. I think it would be a good advertisement for them.

Mr. Abbott—If these comb-foundation men would find out when the Traveling Men's Association meets, and send some of this comb foundation there they would do more towards counteracting this than anything I know of. The traveling men who travel for wholesale houses do more to keep this story alive than any class of men in existence. I never met a traveling man in my life, who was not a bee-keeper, that did not think that comb honey could be manufactured. He wouldn't believe it at all when I came to talk to him. Every once in a while I meet one who wants to bet money on it. I met one in the streets of St. Louis one day, and he said when I told him it was not manufactured, "You are crazy. I know right where the man is; he is down the street here not more than four blocks away, and he was talking to a man that knew well." I put my hand on the man's shoulder, and said, "Am I responsible for $500?" He said, "I think you are." I said, "My dear sir, come on down the street with me and I will give you $500 in clean cash if you show me that man." He stopped and looked at me. He said, "I am awfully busy." I said, "Can you make $500 in a day, or an hour? Come on with me. I want you either to stop this story or else go and show the goods." He said, I didn't see it, but I saw a fellow that said he saw it." [Laughter.] That is all there was to it; but they keep sending it around.

Mr. Becker—The general public confuse foundation with honey-comb. They are all well aware that there are factories that manufacture comb foundation, but they call it "honey-comb." In that way the general public get the wrong idea, and they think it is the genuine honey-comb. Instead of that the word "foundation" should be used, and, as has been suggested, they should be shown a sample so that they understand just what it is. But it is commonly known as honey-comb, and that is the reason I believe the general public has that impression.

Mr. Pease—A few months ago I placed some cases of honey with a firm here in Chicago. At the time I did this one of the gentlemen said, "I want you to tell me something that I can tell the enquiring public about this artificial honey-comb story." I said, "I will not take time to do it now, but I will come in tomorrow and explain that to you." The next day I went down and took with me a section with a full sheet of foundation that was partially drawn out—drawn out more at the top than at the bottom; I used the extra-thin foundation and the bottom had not been drawn out at all. I went on to explain to him the process by which this foundation was used, and how it was made, and that that was the extent of this artificial honey-comb. I left a section containing this partly-drawn foundation with him. Several weeks after that I went into the store and asked him about his honey, and spoke of this sheet of foundation that I had left with him; and he said he had experienced more satisfaction in using that to explain to the public exactly what comb foundation was, and what artificial honey-comb was, than anything else he had ever seen. I simply offer this as a suggestion. I believe whenever you place a consignment of honey with a firm, especially a retail firm, if you will take the pains to place with them a sample of foundation or a section containing the foundation, or partly drawn foundation, you will take a long step in educating the public as to what this artificial honey-comb is.

Mr. Wheeler—I always seem to have to differ from the public. I differ a little on this question of foundation, and I have had considerable experience in selling honey. I have explained foundation to the public, and I have had them go to their friends the next day and tell them, "Why, Wheeler had some manufactured honey there;" and they confused the foundation with the comb, time and again. I have had that happen. They say, "He buys comb and puts it into the hives." One or two years I went to the County Fair and explained foundation to the folks. I had that thrown back at me so many times that I made up my mind I never would speak of foundation at all unless people asked me if I used it. Of course I don't deny using it. But this explaining to the public that you put in a sheet of beeswax—they can't tell whether there is a "sell" there or not, and the trouble is you know how a story goes; they will repeat the thing to their friends, and put an addition to it, and the first thing you know it will come around that you really furnish the bees with comb.

Dr. Miller—"A little learning is a dangerous thing." The trouble in Mr. Wheeler's case is that he doesn't go on and educate them far enough, and keep right after them, and they will come finally to know enough. He gives them just a little sight of that, and they put a whole lot more to it. He should follow that up and show them it is not so. Get after them after they have heard the wrong thing. I do believe enlightenment on the subject will finally bring the public to the right place. I am just half German blood in me and sometimes it gets me into trouble. Mr. York suggested a thing that I had in mind, and by some sort of telepathy he got hold of it and told you to carry around foundation. That was a thing I had been thinking of before, and if he had just waited a little while I would have said that. I believe there is wisdom in it. I have thought after this I will try to have a piece of foundation in my pocket. I don't doubt at all that these foundation makers will approve of that, for we will "draw out" a good deal of foundation in that way!

Mr. Whitney—I would like to make another suggestion in regard to advertising this matter. If we would all write a short article on this subject to our local editor; there is no individual here but can do that in his own locality and publish the facts in regard to this foundation business, this comb-honey business, and this extracted-honey adulteration. By doing that we will do a great deal more than we can do in any other way personally. The editor of our paper at home has been importuning me to write a series of short articles for his paper, and I have partly promised to do it on that very subject, and touching upon bee-keeping generally—all the little things and facts about it. I think if we will all do that in our local papers we will do more to correct this impression that has gone abroad than we can do in any other way, and do it easily, too.

Mr. Meredith—Some three hundred car-loads of excursionists visited our Park the past season where I had an exhibit of bees, extracted wax, a press, and utensils used for the production of honey. Among those were comb foundation partly drawn out, finished and capped, and in almost every manner, and it was very interesting to the people as they had never seen the way extracted and comb honey was produced, in looking over and seeing how the foundation had been extended. And also I had a number of pieces of foundation coiled up in the shape of wax, and I used them for the purpose of selling, selling it for so much, taking an ordinary piece of foundation and winding it around a rod and selling that to them for beeswax. The biggest part of the people that looked over my exhibit could see what was considered artificial comb was practically pure wax drawn out by the bees, and I think it had a big influence in the enlightenment of people in regard to this artificial comb.

(Continued next week.)

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Stings and Honey

We don't like the bee-lady who stings with sharp words and then offers the honey of a smile.—Chicago Record-Herald.

The Weather and Swarming

It must be nice to keep bees where there is no "weather." Out in Colorado or California, it seems, they can count on sunshine day after day, and plan their work accordingly. Here in Northern Illinois the weather must always be taken into account. No matter how pressing the work may be, there may come a day—yes, 2 or 3 days of wet, cool weather, when in all decency no one should go near the bees. If the work of the bees would stop when the work of the bee-keeper is stopped by the weather it would be lesa matter. To be sure, their work afield stops their storing, but their troublesome work at building queen-cells goes right on, rain or shine. That's where the natural-swarming bee-keepers have the advantage.

Inconsistent as bees are in considering the convenience of the bee-keeper, they do have enough consistency to put off swarming when the weather is not appropriate. At least that is true as to prime awarms, and it isn't so hard to prevent afterswarms. But then, if swarming is allowed, either natural or shaken, it "cuts in" on the honey crop.

The Sister Bee-Keeper

A prominent writer in the British Bee Journal, D. M. Macdonald, quotes in a complimentary manner from the letter in this department by Mrs. Honaker, on bee-keeping for women, and adds:

"I should like to see our ladies figure out more prominently than they do. We have it on the high authority of our Junior Editor that they make excellent manipulators, and I believe some of the best 'passea' he ever recorded in his examinations were given to sisters in the craft."

A Summer Drink

Put 1½ ounces of bruised ginger into a pan. Add 3 quarts of water for half an hour, then add 3½ gallons of water, 2 desertspoonfuls of lemon-juice, 2 ounces of honey, and 2½ pounds of sugar. Mix and strain and when quite cold add half a beaten egg and one teaspoonful of lemon extract. Allow to remain 4 days, then bottle.—National Daily Review.

Honey-Cake

Half cup butter, ⅓ cup sugar ½ cup honey one pint of flour, one teaspoonful of yeast powder, two eggs and one teaspoonful caraway seeds. Mix honey and sugar, add the butter melted, the eggs well beaten, the flour sifted with the yeast powder and seeds. Mix into a smooth batter and bake in a fairly hot oven 35 minutes.—Chicago Record-Herald.

Building Queen-Cells

I trust that I am privileged to ask a question, although I am not a "sister," and if you will enlighten me a little on a certain point through the columns of the American Bee Journal, the courtesy will be appreciated.

You say (page 424) that no such thing happens as "destroying the partitions" when a queen-cell is commenced. In case the queen-cell is started right among worker-cells I do not understand how there can be found a "cell which needs no enlarging." Kindly explain.

This is written in no controversal spirit. I have kept a few bees 3 years and have not yet seen a queen-cell in my own hives.

I read your articles with pleasure and profit each week. J. A. Smith.

Hartford Co., Conn.

Two kinds of queen-cells must be recognized: pre-constructed and post-constructed. When a colony contemplates swarming, or superseding its queen, the queen-cells started are cupa having a diameter of about ⅓ of an inch. These are called *pre*-constructed because the queen-cells are prepared as such *before* there is any egg in them. When a colony becomes queenless by any means, the workers select a worker-cell containing a young larva (very rarely it may contain an egg) and change it into a queen-cell, which is called *post*-constructed because made into a queen-cell *after* it has an occupant.

Queens are "usually" reared in pre-constructed cells, "which need no enlarging," but when a worker-cell is turned into a queen-cell it needs a good deal of enlarging. The enlarging is done chiefly outside the worker-cell proper. There is a slight enlarging of the original worker-cell, the cell-walls seeming to be crowded apart, but not to any great extent, and not to any great depth. That destruction of partitions and making 3 cells into one is all a pipe-dream, as you can easily satisfy yourself by pulling off a post-constructed cell, when you will find the worker-cell still there, with its original walls intact.

Now to your question: You want it explained how, when a queen-cell is started right among worker-cells, there can be found a cell which needs no enlarging. No such cell can be found. But pre-constructed cells are not found in such a place. They are found on the edges of combs, or where some inequality occurs in the central parts of combs. If by any means the bees could be forced to start a pre-constructed cell "right among the worker-cells," it would be built outside those cells without doubt, and thus would need no enlarging. Post-constructed cells, however, may be found right among worker-cells, and these must be enlarged, as already explained. The answer to the puzzle, therefore, is that queens are "usually" reared in pre-constructed cells which need no enlarging, but pre-constructed cells are not found right among the worker-cells.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New nnd Unreliable Glasses.
By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

BOTTOM-STARTERS—LOCK-CORNER UP OR DOWN

No, Dr. Miller, I don't use bottom starters, although I confess the advantages they secure. Bottom starters call for a big piece of foundation above, and I use only small starters. Two knife-edges of comb built past each other instead of being joined—and the section spoiled—would occur pretty often with a narrow strip at both top and bottom, I think. But then, I have'nt tried it to any great extent; and I'll be meek if you tell me you have tried it many times, and never a spoiled section. As to the mere look of the section looked at from above, extremes meet, it seems, in our two cases. You put lock down and case it the same way. I put lock up and reverse it in casing. You keep it carefully right side up lest the honey from a few unsealed cells run out. And I—I hardly know whether it's best to tell the lazy man's way I sometimes practice. Hist, while I just whisper it! Leave it on the hive so long that the bees empty all scattering unsealed cells. Page 487.

BEES ROARING OR FANNING IN THE CELLAR.

On page 489 the Northwestern folks start a query which is not worn out yet; but they seem to have abandoned it rather prematurely. Can you tell by the sound of bees that are roaring in the cellar whether they are roaring because they are too warm or roaring because they are too cold? On one side it can be said that wrong temperature, or *some results of wrong temperature*, makes them worry, and the worrying sounds nearly the same in both casea. On the other side it can be said that *orderly* fanning with wings, to make a current of air and cool the hive, is likely to differ perceptibly from the miscellaneous shaking of wings and members when they nre atirring around to warm things up. How is it? I don't know. (Sentence stolen from——Herodotus!) If I were driven to a guess I might guess that bees never fan to cool the hive till the temperature gets quite a bit above 90°—and that a wide-open hive sitting in the cellar never gets so high as that.

CHILLED QUEENS—DO QUEENS FREEZE?

Mr. Ernest R. Root contributes an important experiment, and also an interesting observation. A dozen queens were chilled stiff on ice, and kept so for periods from 2 hours to 48 to see about the truth of a certain claim that has been made. It has been claimed that drone-layers arise by reason of chilling the organs of egg-production—usually in the maila. After this severe test the queens laid all right, and no drone-layers developed. Claim seems about busted.

The observation is one open to the most of us at one time or another. A dead winter-cluster is nearly spherical in form—same as a live one. If there is honey above them (as is the case sometimes) there is always a space—2 inches, more or less—between the cluster and the honey. This was contributed to help peel the dreary old chestnut, Do bees ever freeze in winter! Pages 489 and 490.

AN EXPERIMENT IN DROWNING BEES IN WINTER.

I think the experience of Mr. Wilcox (when he was in heathenish darkness) is worth a good deal of thinking over. Wishing to "take up" a colony he took a notion to drown the bees instead of the usual killing of them with sulphur smoke. (Water damagea sealed honey, and dissolves out the honey of what cells the bees have unsealed—but he did'nt reflect much on that.) The hive was water-tight and the weather was very cold—far below zero. He turned the hive over and filled it full of water. (Of all things!) The day wore away and notwithstanding the fierce cold the water didn't freeze much, and so he left it over night. When about 24 hours had passed there was quite a bit of ice but *still some open water* showing that the heat of honey and bees was still effective somehow after a whole day of exposure to zero temperature. Most astounding! The fact was that the bees were still alive down in there. But when we know that, it is still just as astounding that they could keep on furnishing the amount of heat the above seems to call for. I don't believe the cluster was soaked through with water and then dried out under the stove. It is barely possible that a very compact winter cluster will repel water and not be soaked through—but I doubt that also. The way I imagine it was, is this: Inside the cluster every cell had a bee crawled into it; and the rest were packed between the combs. As the combs are much thicker than the spaces much more than half the bees were in cells to start with. As the water rose all bees not in cells moved upward before it till they got to where there were open cells and then crawled in. Soon all were in cells except a negligable few too stiff to move. The confined air of a cell usually does a pretty good job at keeping out fluid (we find when we try to fill combs with water or bee-feed) and with a bee crawled into each cell the fort would be completely impregnable. That part is no wonder. But how desperately chilly and sodden all their little tails must have got! Say, if it had only atrophied their stings now, and left the rest of the bee in working order, what a champion colony of safety bees there would have been! Page 489.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to Dr. C. C. Miller, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Foul Brood Treatment

1. I think I have a few cases of foul brood, and am going to try the Baldridge plan of treatment. Is it as good as any?

2. After the bees are all out of the diseased hive what is the best thing to do with it?

3. Do you think it could be chilled brood instead of foul brood? They built up good and strong and swarmed early, but after that they did not do much of anything, and upon investigating I found the combs full of dead brood. So I took the supers off these hives and reduced the entrance, and they seemed to do better. In fact, I had to put supers back on some of them. Again, looking into the hive I find that they are very loath to remove the dead brood, but are doing so very slowly. No bad odor comes from the hives when they are opened. Iowa.

Answers.—1. Carefully managed it may be.

2. Wm. McEvoy insists that the hive itself may be used again without any disinfecting.

3. It is impossible to say whether it is foul brood or only chilled brood. In the first stages of foul brood the odor may not be prominent. Read up all the literature on the subject, especially Dr. Howard's pamphlet, and inform yourself thoroughly about bee-diseases. You can then decide much better from seeing the case than any one can from hearing about it.

Brood-Frames Full of Wax and Pollen

There are a number of brood-frames in some of my colonies that are nearly full of wax or pollen, and the queen deposits her eggs among them wherever she can find an empty cell. Will it do to replace them with full sheets of foundation? If so, when is the best time to do it? Iowa.

Answer.—The cells may be filled with pollen (not wax), but generally there is none too much pollen. Bees need pollen just as much as honey. It is nothing out of the way if the 2 outside frames are filled with pollen. Sometimes when a colony is queenless for a time there may be much more, but with a good laying queen the matter generally is righted of itself. If, however, there is something peculiar in your locality, you can replace a frame of pollen with one of foundation, but you would better not do it much before the honey-flow next year.

A Breach-Lighting Smoker

I notice your answers to my questions (page 571,) and will say that Joe "gives in" that those flaky particles are wax, but Joe *won't* "give in" an iota on the other question. You think there is something wrong with Joe or his smoker or his fuel, or the fire would not go out. I don't think this is true, for I often have no further use for the smoker during the day, after having used it once, and not caring to let the fire burn out and thus exhaust the fuel in the fire-box, I slip a cork in the nozzle so that the fire will go out. The next day when I have use for the smoker again, I must unload it in order to get the fire started in the bottom. If I could slip the breach off would it not be much handier than to unload it? I don't want a breach-loader, but I do want a breach that can be slipped off for this very reason. I had a breach-loader smoker, and threw it away. I want a muzzle-loader with a breach-lighting arrangement. Iowa.

Answer.—Yes, I understand the case now, and hereby apologize for the aspersions thrown upon the smoker or the man that uses it. What you desire is an arrangement whereby you can light the partly consumed fuel left in the smoker from a previous loading without the trouble of emptying out the fire-box. There ought to be no trouble, as before said, in getting a smoker of that kind specially constructed.

Running an Apiary for Wax

I am a beginner in the bee-business, and would like to know if it pays to run an apiary for wax alone. I am located in a good section for producing honey, 15 miles back from the Coast, with a certainty of a good crop, and am 27 miles from the city and the railroad. The price obtained for extracted honey is only about 60 cents for a 5-gallon can delivered at Puerto Principe. Mr. Root says that bees and honey pay in Cuba. I have an idea that the profit must be very small.

1. Will it pay to run an apiary for wax alone?

2. What hives, frames, etc., are best for the purpose?

3. Will there be any advantage in using comb foundation? Cuba.

Answers.—1. In most places it would be foolishness to run for wax in preference to honey, but where honey is worth so little as it is with you it will no doubt be well to run for wax, and some are doing that very thing.

2. It probably makes little difference, only you must arrange for feeding back honey in large quantity.

3. It will be well to use foundation to get frames filled with worker-comb in the brood-chamber, but certainly it will not pay to use foundation upon which to build combs that you are going to take for wax.

Bees Abscond With a Newly Introduced Queen

A short time ago I introduced a fine queen to a colony that had been queenless for 2 days, and when I put her into the hive they did not act as if they would kill her. When they released her I took the cage away. The next Sunday I opened the hive and saw 3 or 4 bees around one bee, and I knew it was the queen, so tried to touch her, but she ran down between the combs. I shut the hive and went to the house with the strong belief that I would have some large Italian bees. But today (Saturday) I looked in the hive, and there was not a bee to be seen. All had swarmed, leaving me 4 empty combs and no brood. If I had known the queen would play a trick like this on me, I think I would have kept the money which I paid for her. If she comes to Chicago ship her and 4 frames of bees back, and I will clip her wings so she can't fly away again.

What made them swarm? They were under an apple-tree and faced east. If the one from whom I bought the queen would replace the bees free of charge, I would do business always with him only. Illinois.

Answer.—Without fuller particulars it is not easy to say why the bees absconded. But your saying that the bees left 4 empty combs and no brood makes it seem that there was little to hold the bees in the hive. In any case, there is no likelihood that the queen was at all at fault, and it would be very unreasonable to ask that she should be replaced. Instead of the queen "playing a trick" on your bees, it was your bees that played a trick on the queen, or you that played a trick on both. Under ordinary circumstances a queen is not likely to issue with a swarm until she is a year old; but I have had a queen issue with a swarm when she was not a month old, because I gave her to bees that were in a swarming mood. I have also taken a queen that had just issued with a swarm, and given her to bees with no inclination to swarm, and there was no swarming. So you see the queen is not the one to blame.

Introducing Queens

I put a fine breeding queen into a small queenless colony having only drone-brood, placing her on a frame of hatching brood. Can I safely give another frame with adhering bees soon, or shall I shake the bees in front of the hive to get the young bees for help? Wisconsin.

Answer.—Don't give any but queenless bees unless there are already in the hive 3 times as many bees as the number you add. Or, cage the queen, then give as many bees as you like.

Carniolan Bees

Are all Carniolan bees dark? and are they gentle? I had gotten the impression that they are hustlers, and are not gentle. Illinois.

Answer.—They are dark with whitish bands. Some say they are exceedingly gentle; others say they are cross. Either there is a difference in Carniolan bees or some are called Carniolans that are a cross between Carniolans and blacks. It is difficult to distinguish between the pure blood and the cross.

Queen Entering the Wrong Hive—Rearing Queens

1. Some time ago I had a colony of bees that superseded its queen, and one day I found a virgin on one side of the frame, and the old queen on the other side. I caged the old queen and removed her. There were only 2 queen-cells in the hive, both had hatched, and I thought the queens would manage that part themselves. This colony was on the east end in the row, and I was very much surprised one day to be called home because the bees were swarming. When one of those 2 virgins mated she had gone into the hive just west of her own, had been accepted, and had stayed in the hive about 10 days (and had been laying) before they swarmed out with the old queen.

2. Early this summer I thought I would try to rear some Italian queens, so I made some queen-nursery cages of whitewood boards ⅞-inch thick and 2x2 inches square, with a 1-inch hole in the center, and on one side I bored a ⅝-inch and a ¼-inch hole, one for the queen-cells and the smaller for queen-candy. When the queen-cells were sealed I cut out the large ones and put them in the nursery, placing the nursery in a holding frame in the center of a very strong 1-story colony. Only about 4 out of a dozen queen-cells hatched, and the queens were weak and had no wings, otherwise they were large. Had they been

chilled, or wasn't the nursery made right? The nursery was covered on the sides with wire-netting, and a tin cap where the queen-cell and candy were. Would you advise me to try them again? If so, how?

INDIANA.

ANSWERS.—1. The usual thing, when two virgins hatch in the same hive, is for one to kill the other, and I hardly see how you can be sure that did not happen in your case. Is it not possible that the colony that swarmed reared a virgin queen itself? Still, it is true that not infrequently young queens enter the wrong hive.

2. Yes, you should try again; there is no reason why you should not succeed as well as others. It is possible that the cells were not ripe enough. It is better not to cage cells till they are within a day or so of having the virgins emerge. Your cages were not of the best kind. Being ⅞ thick, the bees might not get near enough to the cells, especially as one side was wood. You will do better probably with the common Miller introducing cage that you will find mentioned in all catalogs, or you may like the improved Miller cage described in "Forty Years Among the Bees," page 247.

Reports and Experiences

Dealing With Laying Workers

I note that bee-keepers are still troubled to know how to deal with that pest of the hive, the laying worker, uniting with another colony having a fertile queen being the only remedy I have seen proposed.

I have a remedy that has always succeeded with me, either to introduce a fertile queen or have the bees rear a queen from brood. It is this:

Take the hive from its stand and carry it behind the house or some building near by, then after placing an empty hive on its stand to keep the bees from going into other hives, shake or brush every bee off the combs on the ground, setting the combs to one side away from the bees, and after all are off and the hive cleaned, put the combs back in the hive and return it to its old stand. Then put a frame filled with brood and covered with bees into the hive, and the bees will do the rest. Or, if you want to give them a queen do it after a few hours. G. A. WRIGHT.

Mitchell Co., Iowa.

A Satisfactory Bee-Veil

A very satisfactory bee-veil is made from 1½ yards of black netting, drawn in at the top and bottom, the same as any bee-veil, then dipped in cooked linseed oil. Wash it thoroughly in this preparation, rubbing it until all the bubbles have disappeared from the meshes, and pull it through a dry cloth. Then hang it up in a warm place to dry. Put a stick through it horizontally when drying, so that it will be spread out. This makes the veil stiff, and the bees do not attempt to sting through it as they do when it is flimsy. It will also last a good deal longer than an ordinary bee-veil. Raw linseed oil might answer the purpose as well as the cooked, but we have not tried it. HAYCK BROS.

Kane Co., Ill.

Net Gain of an Average Colony

The net gain of an average colony brought up to good strength by feeding about a month before the harvest of this year, was as follows:

The first gain for the year was May 18, which was ¾ pound; this slowly increased until May 31 when the gain for the day was 11 pounds; the next day it was 8½, and for the following consecutive days, respectively: 12, 10, 3, 0, 10, 6½, 7½, 4, 2, 9, 10, 9½, 8, 9½, 10, 8½, 8, 1, 3, 2, 8. Then it dropped very rapidly, and in less than a week there was a loss of from ¼ to one pound, and until Aug. 7 the loss kept up. Now, strange to say, they are storing honey from wild boneset, about one to two pounds a day. Week after week in July they worked on acres of white clover, with a steady loss every day. Last year the same colony stored 250 pounds of honey. But it must be borne in mind that they never lacked for empty comb to store in.

From about 50 colonies, spring count, I had only 2 swarms this year, but they are swarming some now. It is mostly on account of superseded queens, but an old clipped queen came out yesterday.

There is barely half a crop of honey in this locality, as most bees swarmed in June.

Linn Co., Mo., Aug. 12. IRVING LONG.

Easy Queen Introduction

A prime swarm came out this year on April 28, with 2 queens. I caught one of these queens and let her run into the hive of a queenless colony, without any restrictions, and she was received all right.

J. B. AUSMUS.

Benton Co., Ark., Aug. 16.

Backward Spring Makes Poor Season

May and June were so wet and cold that the bees were very slow in breeding up, my first swarm issuing July 6, fully one month later than usual. However, since that date we have had a fair flow from white clover and basswood. I think I can count on an average of 30 pounds of comb honey per colony, which will be as much as I got last season. I have now 40 colonies, but have had only 14 swarms this season. GEO. STOUT.

Hennepin Co., Minn., Aug. 14.

Swarm Clustered for 29 Hours

I started last spring with 4 colonies. I now have 5, and they are not swarming as much as I think they should.

One of my neighbors, who is afraid of bees, when coming through his pasture on the afternoon of July 4, at about 4 o'clock, saw a swarm of bees clustered on a bush. He wanted to let me know about them, so I could get them, but he was going away in the evening and had not time. The next day at 5 o'clock p.m., when he went after his cows, there was that cluster yet. In the evening he came to let me know and I hived them that night at 9 o'clock, so we know they actually hung in the cluster 29 hours, besides whatever time they may have hung before he saw them. I have "Langstroth on the Honey-Bee," and "A B C of Bee Culture," and I could find nothing like this in either. What do you suppose was, or could have been, the cause of their hanging so long? They were good Italian stock. I hived them in a double-super Wisconsin hive, and they are doing fine. Their queen was as fine as any I ever saw.

Adams Co., Wis., July 8. W. B. SMITH.

[Although such cases do not often occur, a good many have been reported. Sometimes the weather accounts for it, turning rainy after the swarm has settled, thus preventing the bees from taking flight. There have been a few cases in which the bees stayed permanently where they clustered.—EDITOR.]

Record of a Good Queen

Here is the record of a queen which I got in 1904. On Aug. 17 of that year I gave her 2 frames with bees and brood, and gave frames with foundation as she needed them. When cold weather came on they had 7 frames filled with honey and brood (and lots of brood, I tell you.) This spring the colony was strong. I gave them a double hive, and it contained so much brood that I divided them, with good results, June 15. July 5 a monster swarm issued, and they now have 2 bodies and one super, and if the flow should return I will have to give them another. July 13 another small swarm issued, with a fine queen, so I put them in an 8-frame hive. They are doing well.

To-day I looked through the parent colony. The young queen has mated with a 5-banded golden Italian drone, and she has a fine nest of brood. So you see I have 4 fine swarms of bees and 200 pounds of honey, all from one queen. If any one should ask me if I think it pays to get queens my answer would be yes, and, emphatically, *yes*. I got some 5-banded golden Italians from Texas which are very nice. I bought them as an experiment, and will report later as to how I like them.

I had 6 colonies, spring count, and now have 16. I am making them pay for everything they get (or everything I get for them,) so I am sure they will not bankrupt me. The neighbors say that I would tame the worst bees on earth and make them gentle. Bees are not as vicious as people think.

I owe much of my success to the good reading matter found in the American Bee Journal, and advise every one who keeps bees or is thinking of doing so, to subscribe for it.

Kane Co., Ill., Aug. 8. E. J. BRYANT.

Poor Honey Year in Georgia

I mingle my voice with the other "busted" bee-keepers by saying that this has been a rocky year on bee-keeping in Georgia.

There was no fall flow last year, and the winter was hard on the bees. There were but few of them in the early spring, and no honey, though plenty of bloom, but bees never noticed it. There was a fine crop of honey from the gallberry in this and other sections.

We have had a fine fall flow and bees are in good shape for winter. I have taken off 40-1-5 pounds of honey per colony, but have had very little increase. J. J. WILDER.

Crisp Co., Ga., Aug. 14.

Langstroth on the ⁂ Honey-Bee

Revised by Dadant—Latest Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.20, or club it with the American Bee Journal for one year—both for $2.00; or, we will mail it as a premium for sending us **THREE NEW** subscribers to the Bee Journal for one year, with $3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

If you want the Bee-Book
That covers the whole Apicultural Field more completely than any other published, send $1.20 to
Prof. A. J. Cook, Claremont, Cal.,
—FOR HIS—
"Bee-Keeper's Guide."
Liberal Discounts to the Trade.

Please mention Bee Journal when writing Advertisers.

CONVENTION NOTICES.

A Bee-Keepers' Field-Meeting will be held at The A. I. Root Co.'s exhibition apiary at Jenkintown, Pa., Thursday, Sept. 7, 1905, in which will unite the Pennsylvania State Bee-Keepers' Association, New Jersey State Bee-Keepers' Association, Philadelphia Bee-Keepers' Association, New York bee-keepers, and all bee-keepers and others interested in bees, from the surrounding territory. Jenkintown is a suburb of Philadelphia. Orders for reduced rates on the local ticket agents for round-trip tickets to the convention can be secured free on application to Wm. A Selser, of Jenkintown, Pa., Hon. H. A. Surface, Harrisburg, Pa., and Dr. E. F. Phillips, Washington, D. C.

National.—The International Fair is to be held in San Antonio, Tex., Oct. 21 to Nov. 1. When this Fair is in progress there are very low rates in force on the railroads out for 600 or 700 miles. Then there are harvest excursions from the North on the 2d and 4th Tuesdays of the month. The 4th Tuesday in October comes on the 24th. Considering these facts, it has been decided to select Saturday, Oct. 28, as bee-keepers' day at the Fair. This will give ample time for members from the North to reach the city by starting the 24th. The regular sessions of the convention will begin Monday, Oct. 30, *and continue three days.*

The headquarters of the National Association will be at the Bexar Hotel (pronounced Baer, long sound of a), corner of Houston and Jefferson Sts., and rates are only $1.00 a day, and up. The convention will be held at Elks' Hall, 125 W. Commerce St., only two blocks from the Bexar Hotel.

Flint, Mich. W. Z. HUTCHINSON, *Sec.*

Capital City Apiary!

Fine Italian Queens

Untested, after June 15, 75c; Tested, $1.00; Breeders—the very best, $5.00. Terms cash with order. Safe arrival and satisfaction guaranteed. **WALTER S. ROSS.**
1123 Blaine Ave., INDIANAPOLIS, IND.
27A13t Please mention the Bee Journal.

BINGHAM Original Direct Draft CLEAN Bee Smokers

4 Largest Sizes Soot Burning

Never Go Out

And last from 5 to 21 years

Pat'd 1878, '82, '92 & 1903

Tin 4-in. Smoke Engine $1.50. 3½-inch $1.10. 3-inch $1.00. 2½-inch 90c. 2-inch Wonder 65c—per mail.

Sent on receipt of price per mail.

T. F. BINGHAM, Farwell, Mich.

OTISVILLE, PA., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. FRED FODNER.

Please mention Bee Journal when writing.

Tennessee Queens

Owing to the great demand for my TENNESSEE QUEENS for several seasons, and the quantity of standing orders from old customers, I decided not to advertise until my books were cleared of orders, and thus avoid disappointing customers.

I am now ready to fill orders by **RETURN MAIL.** Breeders used: Imported dark leather-colored Italian; my selections from light imported Italian; Moore's long-tongue; golden; Carniolan (mated to Carniolan drones in distant yard, and to Italian drones); imported Caucasian (lately received, mated for the present to Carniolan and Italian drones).

Prices until Oct. 1.		After Oct. 1.		Tested—	
Untested 12 for	$6.00	Untested 12 for	$7.50	Each	$1.50
" 6 for	3.25	" 6 for	4.00	Breeders—	
" 1 for	.60	" 1 for	.75	Each	3.00

27A13t **JOHN M. DAVIS, Spring Hill, Tenn.**

Wisconsin Basswood Sections

And Prompt Shipments

Is what we are making for our customers.

— DOVETAILED HIVES AND SHIPPING-CASES —

We carry a full line of SUPPLIES. Ask for Catalog.

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Shipping-Cases

We have thousands of letters on file in our office praising the quality of our Shipping-Cases. If we have pleased them and have maintained our quality, we can please you. It is only a matter of a trial order. For prompt shipment send us your order now.

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Power Building, MINNEAPOLIS, MINN.

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We are...... Manufacturers of **Bee-Keepers' Supplies**

SHIPPING-CASES—EXTRACTORS—SECTIONS—HIVES—AND EVERYTHING FOR THE BEE-KEEPER

Send for Illustrated Catalog and Price-List. Prompt Shipments. Low Prices.

MONDENG MFG. CO.,
147 and 149 Cedar Lake Road, MINNEAPOLIS, MINN.

Best Goods in the World

Best Bee-Hives, Sections, Comb Foundation, and everything the bee-keeper needs. Now is the time to buy for next season's use. **Special Discount on all bee-supplies not now in season. Lewis' Goods at factory prices.** Catalog free.

Honey-Packages for Marketing Honey

Such as Shipping-Cases, Tin Cans, Buckets. **Glass Jars with patent spring sealers and glass stoppers;** regular Glass Fruit-Jars, etc. Sample cases for sending samples of extracted honey by mail. Special prices on Glass Honey-Jars and Tin Buckets.

Fine Italian Queens by Return Mail

Untested Queens	$ .75	Tested Queens	$1.00
Select Untested Queens	1.00	Select Tested Queens	2.00

New Crop Extracted Honey

We have an abundance of the finest honey in the world. Can ship in cans and barrels. If you can't supply the demand in your locality write to us at once and tell us how much you can use; 10 cents for sample by mail, but we return the 10 cents with your first order.

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We can furnish any quantity of any grade of paint on short notice. Special prices on absolutely pure paint. Let us quote on paint for your house.

Write to-day and tell us what you want in our line, and how much. **Best service, lowest freight rates, satisfaction to all.**

C. M. SCOTT & CO. 1004 East Wash. Street
Indianapolis, Ind.

Shipping-Cases PLENTY FOR ALL

Made of Michigan white pine; 24-lb., $13; 12-lb., $8; 20-lb. Danzy, $11 per 100; less than 100 lots, ½c more each; 3-in. glass, 1c each more; No. 1 Sections, $4; No. 2, $3.50 per 1000. All kinds of Supplies kept in stock. Send for list. **W. D. SOPER.**
Rural Route 3, JACKSON, MICH.
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40-Page Catalog Free!

Full information regarding all kinds of BEE-KEEPERS' SUPPLIES. Best goods. Latest improvements. Danzenbaker Hives and Fixtures. Prompt shipments. JOHN NEBEL & SON SUPPLY Co., High Hill, Mo. 3Dtf

ITALIAN QUEENS

	1	3	6
Untested	65c	$1.75	$3.00
Tested	90c	2.40	4.50

Safe arrival guaranteed.

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The WOMAN'S JOURNAL
702 Journal Bldg. CHICAGO

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Learn Telegraphy and R. R. Accounting

$50 to $100 per month salary assured our graduates under bond. You don't pay us until you have a position. Largest system of telegraph schools in America. Endorsed by all railway officials. OPERATORS ALWAYS IN DEMAND. Ladies also admitted. Write for Catalog.

MORSE SCHOOL OF TELEGRAPHY,
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TOTAL ABSTINENCE DEPARTMENT
—OF—
Security Mutual Life Insurance Company

EACH POLICY HOLDER is entitled to a Bond issued by the National Total Abstinence League.
YOU may hold a policy and BOND.
General and special agents wanted. Address,
3D28t A. S. RENNIE, Mgr., 614 Marquette Bldg., Chicago, Ill.

Send for Our 1904 Catalog and Price-List.

OUR HIVES AND SECTIONS

Are Perfect in Workmanship and Material.

By sending in your order NOW, you will SAVE MONEY, and secure prompt shipment.

PAGE & LYON MFG. CO., New London, Wis. U.S.A.

Please mention Bee Journal when writing.

Glass Jars for Honey

We can ship by return freight at the following prices:

½-lb. Jars with corks—1 case of 21 doz. for $5.50; 3 cases, $15.50.

¾-lb. Tiptop Jars—1 case of 14 doz., for $5.25; 3 cases for $15.

1-lb. Tiptop Jars—1 case of 12 doz., for $5; 3 cases for $14.

Second Hand... Comb Foundation Mills

We have for sale a 6-inch and a 10-inch Second-Hand Comb Foundation Mill. Used scarcely any; good as new. If interested write for prices.

YORK HONEY AND BEE SUPPLY CO.
(Not incorporated)
141 Ontario Street, - CHICAGO, ILL.

Now is the Time to Order

Your Bee-Hives, Sections, Shipping-Cases, Berry Boxes, and Crates for the coming season. By sending us a list of goods wanted we can save you money.

SHEBOYGAN FRUIT BOX CO.
35A18t SHEBOYGAN, WIS.

Must Close Out Queen-Trade

By Sept. 15. Good Untested Queens, 50 cents. Tested, $1.00. J. F. MICHAEL,
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THIS LIGHTNING Lice Killing Machine

kills all lice and mites. No injury to birds or feathers. Handles any fowl, smallest chick to largest gobbler. Made in three sizes. Pays for itself first season. Also *Lightning Lice Killing Powder, Poultry Bits, Lice Murder, etc.* We secure special low express rates. Catalog sent free. Write for it.

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WANTED

A man and wife (no children) to take charge of a small country home. Must be a good gardener, who also understands bees, poultry, cows and horses. A good place and home for the right kind of people. Address or call on,

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Select Tested Breeders

Golden Yellow Breeding Queens, $1. Every young queen from them yellow as gold. Non-swarming, non-stingers and hustlers for honey. 8-page leaflet on Queen-Rearing free to all.

HENRY ALLEY, Wenham, Mass.

PURE ITALIAN BEES

The most beautiful, gentle, prolific, best working, and, being long tongued, best honey-gatherers. PRIZES — VI. Swiss Agricultural Exhibition, Berne, 1895; Swiss National Exhibition, Geneva, 1896; Bee-Keeping Exposition, Liege, Belgium, 1895; Universal Exposition, St. Louis, U. S. A., 1904. THE HIGHEST AWARD. Extra Select Breeding Queen, $3.00; six, $16.00; dozen, $30.00. Selected Queen, $2.00; six, $11.00; dozen, $20.00. Special prices on larger number. The addresses must be clear; payments by postal money orders. If by chance a queen dies upon the journey she is to be returned immediately, with a postal certificate, and another queen will be sent gratis. Address

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PEDEVILLE, NEAR BELLINZONA,
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This country is politically the Switzerland Republic, but lies geographically in Italy, and possesses the best kind of bees known. In writing mention the American Bee Journal.

BLACK BREASTED RED GAMES—"The KING of Poultry." Large size, good layers of finest eggs. Hardy and fearless, the best all purpose fowl. Willow legs and Bay eyes. Illustrated circular. 25th year. "H. H. FLICK,"
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Guaranteed Superiority!
Lowest Prices

We have been making Bee-Hives, Sections, etc., for over 20 years.

New .. Illustrated .. Catalog free; also sample copy of

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(Monthly, 50 cts. a Year.)

The best magazine for beginners. (It has been published by us regularly for 15 years.)

Address,
THE W. T. FALCONER MFG. CO.,
JAMESTOWN, N. Y.

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— ITALIAN —
Bees, Queens and Nuclei

Choice home-bred and imported stock. All queens reared in full colonies.

One untested queen ...... $ .65
One tested queen .... .90
One select tested queen .. 1.10
One breeding queen 1.65
One comb nucleus (no queen) 1.00

All grades ready to send by return mail.

Safe arrival guaranteed. For prices on quantities and description of each grade of Queens, send for free price-list. 100 or 200 lbs. of Brood Foundation. Send for sample and prices.

J. L. STRONG.
204 East Logan Street, CLARINDA, IOWA.
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HONEY AND BEESWAX
When consigning, buying or selling, consult
R. A. BURNETT & CO.,
199 South Water St. Chicago, Ill.
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DEATH TO LICE.

LICE SAP LIFE
That's how they live and thrive. You can't have healthy, profitable fowls or stock and have lice too.

Lambert's Death to Lice
promptly kills all insect vermin and makes sitting hens comfortable. Sample 10c; 100 oz., $1.00 by express.

O. K. STOCK FOOD CO.,
D. J. Lambert, Vice-Pres.
406 Monon Bldg., Chicago, Ill.
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New Comb Honey-Crop of 1905
We believe it would pay those having it in car lots or otherwise to write us. Give us your lowest spot cash prices, and fully describe the goods and style of package; when you can ship, etc. We handle more of these goods than any other firm in the U.S. Yours for business,
THOS. C. STANLEY & SON, Bees and Honey
Manzanola, Colo., and Fairfield, Ill.
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Headquarters for Bee-Supplies
ROOT'S GOODS
At Root's Factory Prices

Queens Now Ready to Supply by Return Mail

Stock which cannot be excelled. Each variety bred in separate apiaries, from selected mothers; have proven their qualities as GREAT HONEY-GATHERERS.

Golden Italians Have no superior, and few equals. Untested, 75c; 6 for $4.00.

Red Clover Queens Which left all records behind in honey-gathering. Untested, 75c; 6 for $4.

Carniolans —They are so highly recommended, being more gentle than all others. Untested, 75c; 6 for $4.00.

C. H. W. WEBER CINCINNATI ...OHIO...
Office and Salesrooms, 2146-48 Central Ave. Warehouses. Freeman and Central Aves.

Honey and Beeswax

Chicago, Aug. 18.—The demand has absorbed all the offerings of fancy and A No. 1 grades of white comb honey at 14c, while No. 1 has sold at 13@13½c. No call at present for other than the best grade, it really being difficult to place what ordinarily is called No. 1. Extracted, white. 6@7c; amber. light and dark, 5@6c. Beeswax, 28c. R. A. Burnett & Co.

Albany, N.Y., July 26.—There is some call for honey, new crop, and if here would probably sell for best prices of season, as the general impression is there will be a large crop. White comb honey will start off at 15c to early buyers. H. R. Wright.

Kansas City, Aug. 24.—The honey market here shows a decided improvement and the market is firm at $2.85 to $3.00 for No. 1 and fancy white comb in 24 section cases. Amber and other grades are selling for less, according to quality. Extracted in fair demand, white selling at 6½ cents; other grades down to 4½c. Beeswax, 28c. C. C. Clemons & Co.

Cincinnati, Aug. 18.—The heavy requests for offers on honey recently, have a tendency to lower the prices. We are striving hard to maintain good prices, by giving our friends more than their honey is worth, to hold up the market. So far we have been successful. Still offer extracted honey as follows; Amber in barrels and cans at 5¾@6½c, respectively. White clover at 7@8½c. We feel that lower prices will prevail in the near future.

Comb honey is coming in quite freely. We quote fancy white comb honey at 12@15c. The arrival of Western car-load shipments of comb honey is anticipated daily, after which the market will be shattered as to prices. Beeswax, 26c. The Fred W. Muth Co.

Denver, June 26.—The demand for both comb and extracted honey is light at present, and there is enough of old stock on hand yet to last until the new crop comes in; the same is selling as follows: No. 1 white comb, per case of 24 sections, $2@$2.20; No. 2. $1.75@$2. White extracted, 6½@7½c per pound. Beeswax, 26c. The Colo. Honey-Producers' Assn.

New York, Aug. 18.—No new comb honey on the market as yet, and very few inquiries so far Extracted is in fairly good demand and we quote: California at from 5½@7c per pound, according to quality and quantity. Southern in barrels from 50@65c per gallon. Beeswax remains steady at 29c per pound. Hildreth & Segelken

Philadelphia, Aug. 21.—Some honey arriving, with prospects of a good crop all through the East, but no call for comb honey during the hot weather, so that prices are not as yet established. Extracted honey arriving freely. We quote as follows: Fancy white, 7@8c; amber, 6@7c. Beeswax, 27c.

We are producers of honey and do not handle on commission. Wm. A. Selser.

Cincinnati, O., Aug. 8.—There is no demand for comb honey on account of the warm weather. Extracted is in usual demand for this season of the year. We quote white clover at 7@8c; amber, in barrels, at 5¼@5½c; in cans, 5¾@6c. Beeswax, 28c. C. H. W. Weber.

San Francisco, Aug. 16.—White comb. 1-lb. sections, 9@10 cents; amber, 7@8c. Extracted, water-white, 5@5¼c; white, 4¾@5c; light amber, 4@4½ cents; amber, 3½@4c; dark amber, 2½@3c. Beeswax, good to choice, light, 27@29c.

Stocks of honey are large and the market weak. Receipts are of fair size and excellent quality. Prices are being maintained at figures quoted despite the fact that there is very little demand at those figures.

FOR SALE
Until further notice, finest quality new crop California Water-White White Sage and Light Amber HONEY in 60-lb. tins, 2 in a case; new cans and new cases Write for prices and samples, and state quantity you want.
HILDRETH & SEGELKEN
265 & 267 Greenwich Street, New York, N.Y.
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PURE BASSWOOD
HONEY
IN 60-POUND CANS

We have a good supply of **Pure Basswood Honey** in 60-lb. cans that we can ship by return freight at these prices: 1 can in a box, at 8 cents a pound; 2 or more cans, boxed, at 7½ cents—all f.o.b. Chicago. Cash with order. Sample, by mail, 8 cents in stamps, to cover package and postage.

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YORK HONEY AND BEE SUPPLY CO.
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ON ORDERS ACCOMPANIED BY CASH SENT US IN

SEPTEMBER

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On receipt of the names and addresses of 5 bee-keepers in your vicinity we will mail to any address free of charge postpaid a copy of our little book, "Bee Pranks," which is a pamphlet compiled from newspaper clippings containing many laughable and interesting anecdotes which have actually happened in the life of the bee. Published only by **G. B. LEWIS CO., Watertown, Wis., U.S.A.**

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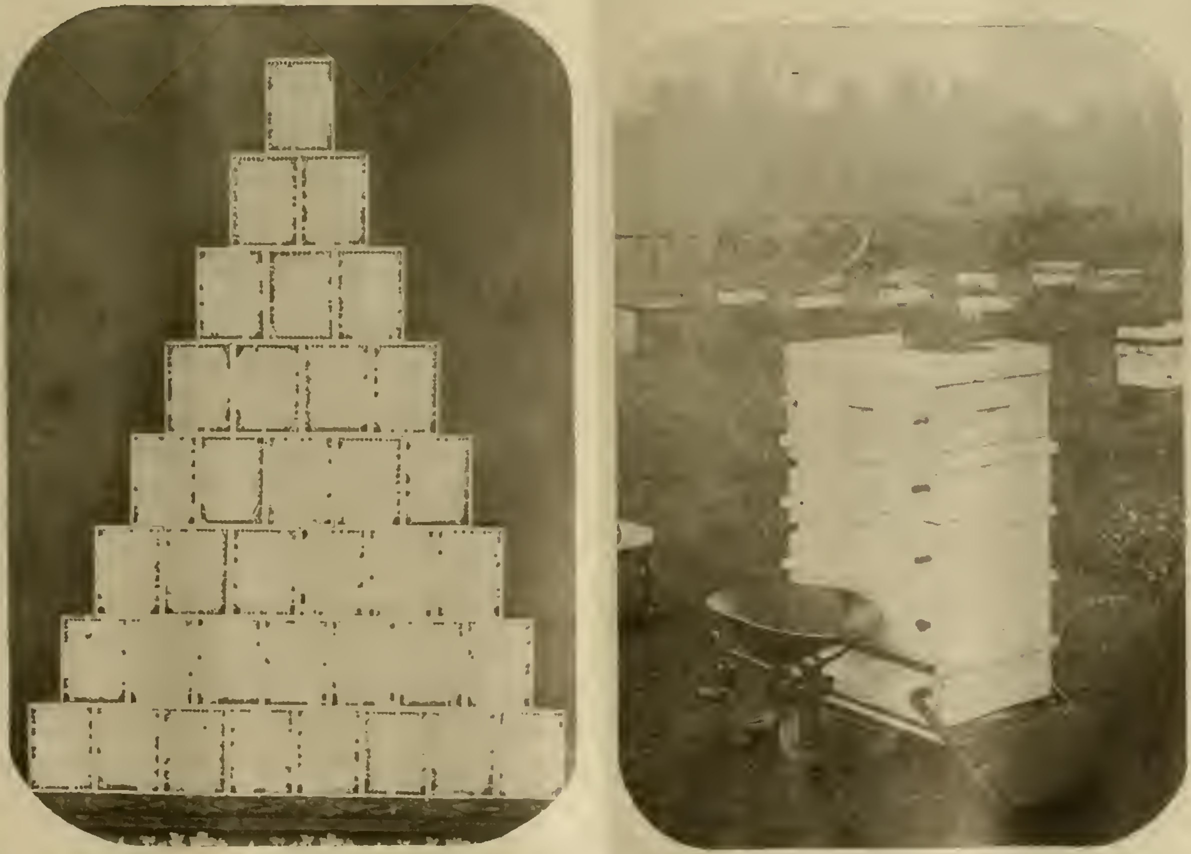
National Bee-Keepers' Convention at San Antonio, Texas,
Oct. 30, 31 and Nov. 1.

ESTABLISHED IN 1861
THE AMERICAN
OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL

45th Year CHICAGO, ILL., SEPTEMBER 7, 1905 No. 36

From George H. Kirkpatrick, of Kalkaska Co., Mich.



PART OF CROP OF ONE COLONY HIVE ON SCALES

(See page 630)

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY
GEORGE W. YORK & COMPANY
334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

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SUBSCRIPTION RECEIPTS.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows that the money has been received and credited.

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Objects of the Association

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00

General Manager and Treasurer—
N. E. FRANCE, Platteville, Wis.

☞ If more convenient, Dues may be sent to the publishers of the American Bee Journal.

The Honey-Producers' League

(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

MEMBERSHIP DUES

1. Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.
2. Any honey-dealer, bee-supply dealer, bee-supply manufacturer, bee-paper publisher, or any other firm or individual, may become a member on the annual payment of a fee of $10, increased by one-fifth of one (1) percent of his or its capital used in the allied interests of bee-keeping.

GEORGE W. YORK, Manager,
334 Dearborn St., CHICAGO, ILL.

Italian Queen-Bee Free as a Premium

To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us ONE NEW subscription with $1.00 for the Bee Journal a year. Now is the time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.

HONEY-JARS.

For a limited time we offer No.25 Honey-Jars, porcelain cover, metal screw cap, holding one pound of honey net, one gross in case complete in 5-gross lots, $4.00 per gross; less quantities, $4.50 per gross, f.o.b. New York. If you want to secure some, let us know at once.

HILDRETH & SEGELKEN,
265 & 267 GREENWICH ST., NEW YORK, N. Y.
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IN THE HEART OF MICHIGAN

Within a hundred miles of me are over ¾ of the bee-keepers of Michigan. I am on the Pere Marquette R.R., which completely covers this region. Root's Goods, Factory Prices, Prompt Service, Low Freight. Send for Catalog.

GEORGE E. HILTON,
28A12t FREMONT, MICH.
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"If Goods are wanted Quick, send to Pouder"

BEE-SUPPLIES

Root's Goods at Root's Prices

Everything used by Bee-Keepers.
POUDER'S HONEY-JARS. Prompt Service.
Low Freight Rates. ∴ ∴ ∴ Catalog Free.

If you wish to purchase finest quality of HONEY for your local trade, write for my free monthly price-list of honey.

Why not secure your BEE-SUPPLIES NOW FOR NEXT SEASON'S USE and avail yourself of the following very liberal discounts? Goods all Root Quality.

	Percent		
For cash orders before Oct. 1	10	For cash orders before Jan. 1	7 percent
For cash orders before Nov. 1	9	For cash orders before Feb. 1	6 percent
For cash orders before Dec. 1	8	For cash orders before Mar. 1	4 percent
		For cash orders before Apr. 1	2 percent

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Dittmer's Foundation is the Best.

Send for Catalog, Samples and Discounts, and judge for yourself. 1904 output, 50 percent increase over 1903.

Full line of SUPPLIES, wholesale and retail.

Working Wax into Foundation for Cash a Specialty.
E. GRAINGER & Co., Toronto, Ont., Sole Agents in Canada for Dittmer's Foundation.

GUS DITTMER, Augusta, Wis.
Please mention Bee Journal when writing.

Shipping-Cases

We have thousands of letters on file in our office praising the quality of our Shipping-Cases. If we have pleased them and have maintained our quality, we can please you. It is only a matter of a trial order. For prompt shipment send us your order now.

JOHN DOLL & SON,
Power Building, MINNEAPOLIS, MINN.
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10 percent Discount On orders accompanied by cash sent us in SEPTEMBER. This applies to all goods excepting Honey-Packages for current use.

BY RETURN FREIGHT OR EXPRESS. Send to

H. M. ARND, Mgr.
YORK HONEY AND BEE SUPPLY CO. (Not Inc).
141 & 143 Ontario Street, CHICAGO, ILL.
(5 short blocks north of the C. & N. W. Ry. Passenger Station, using the Wells St. Cable Line from center of city to Ontario St.)
Long Distance Telephone—North 1559

Catalog and prices on Honey on application. If you want Good Goods at Factory Prices and Prompt Shipment, send your orders, or call on us.

BEESWAX WANTED—26c cash, or 28c when taking Bee-Supplies in exchange—delivered here.

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WE GUARANTEE SATISFACTION.

BEE-SUPPLIES

OF ALL KINDS.

Beeswax Wanted at all Times.

DADANT & SONS, Hamilton, Ill.

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FANCY COMB HONEY IN NO-DRIP SHIPPING CASES, ALSO EXTRACTED HONEY. IF YOU HAVE ANY TO OFFER, QUOTE US YOUR ROCK BOTTOM CASH PRICE DELIVERED HERE, AND MAIL US A SMALL SAMPLE OF THE EXTRACTED HONEY. WE BUY EVERY TIME THE PRICE IS RIGHT, AND REMIT PROMPTLY.

THE FRED W. MUTH CO.

No. 51 WALNUT STREET, CINCINNATI, OHIO.

FINE QUEENS

By Return Mail. From my 3 and 5 banded long-tongued Italians. Tested, $1; warranted tested, 75c; untested, 60c; no disease. I guarantee all Queens perfect, to arrive safely, and to give reasonable satisfaction. I have pleased others and can please you. May I ask for a trial order?

CHAS. M. DARROW

23Atf R. F.D. No. 1. MILO, MO.

WE SELL ROOT'S GOODS IN MICHIGAN

Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.

M. H. HUNT & SON.

BELL BRANCH, WAYNE CO., MICH

Please mention Bee Journal when writing.

VIRGINIA QUEENS Italian Queens secured by a cross, and years of careful selection from red-clover queens and superior stock obtained from W. Z. Hutchinson. Untested queens, 75c; after June 15, 60c; tested queens, $1.00; after June 15, 75c; selected tested queens, $1.25; after June 15, $1.00. Write postal card for circular. CHAS. KOEPPEN,

17A26t FREDERICKSBURG, VA.

QUEENS

We have secured the services of one of the best Queen specialists in the U. S. Over 20 years' experience rearing Queens. Our Yard is stocked with select breeders from the best yards in America, and can send Queens by return mail.

Prices to Sept. 1, 1905:

Untested Queens .... $ .75
Select Untested Queens 1.00
Tested Queens 1.50
Select Tested Queens 2.50

GRIGGS BROS,

521 Monroe Street,

TOLEDO, - OHIO.

Please mention Bee Journal when writing.

Bee-Supplies!

We carry a large stock and greatest variety of everything needed in the Apiary, assuring best goods at lowest prices, and prompt shipments. We want every bee-keeper to have our Free Illustrated Catalog, and read description of Alternating Hives, Massie Hives, etc. Write at once for Catalog, either English or German language.

KRETCHMER MFG. CO., Red Oak, Iowa.

—AGENCIES—

Trester Supply Co., Lincoln, Neb.
Shugart & Ouren, Council Bluffs, Iowa.
Fulton & Ford, Garden City, Kansas.
I. H. Myers, Lamar, Colo.
Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex.

SEPTEMBER SPECIAL

Cash Discount for Early Orders

We can not remember a year when we were not crowded with orders through the spring months, and somewhat behind, some years more than others. In order to divert some of this trade to the fall and winter months, we have offered inducements in the way of an early-order cash discount. This year we will be more liberal than ever before in the amount of discount allowed. For some months the price of some of the materials used has been a little lower, and we have stocked up heavily, and propose giving you the advantage of the saving in price. The abundant farm crops throughout the country are stimulating trade in almost all lines, and prices are already stiffening. The discounts which we propose to offer for early cash orders are as follows:

For cash orders before	Oct. 1	10	percent.
" "	Nov. 1	9	"
" "	Dec. 1	8	"
" "	Jan. 1	7	"
" "	Feb. 1	6	"
" "	March 1	4	"
" "	April 1	2	"

You will notice that, after January, the discount drops 2 percent a month; and if we find that advancing prices of materials do not warrant the larger discount, we reserve the right to reduce the amount of discount at any time. Your safest plan is, therefore, to order at once.

This discount is only for cash before the dates named, and is intended to apply to hives, sections, frames, foundation, extractors, smokers, shipping-cases, cartons, and other miscellaneous bee-keepers' supplies. It will not apply on orders for the following articles exclusively; but where these form no more than about 10 percent of the whole orders, the discount may be taken from the entire bill: Tinned wire, paint, Bingham smokers, Porter bee-escape, glass and tin honey-packages, scales, bees and queens, bee books and papers, labels and other printed matter; bushel boxes, seeds, and other specialties not listed in our general catalog.

Beeswax and Comb Foundation

To compensate for the large early order cash discount we propose to increase the trade price of wax; and until further notice we will pay 26 cts. cash, or 30 cts. in trade, for average wax delivered here or at our branches. When you take trade at 30 cts. a pound you will not be entitled to the early-order discount on the supplies.

The price of comb foundation was reduced Aug. 1 two cents a pound, and the revised price stands as follows:

GRADE.	Size, and sheets per pound.		In lots of 1 lb.	5	10	25	50
Medium Brood	7¾x16⅞	7 to 8	55	53	51	49	48
Light Brood	7¾x16⅞	9 to 10	57	55	53	51	50
Thin Super	3⅞x15½	28	62	60	58	56	55
Extra Thin	3⅞x15½	32	65	63	61	59	58

The early-order cash discount applies to the reduced price of foundation, making a total net reduction of 7 to 8 cts. a pound for September orders. We recommend that shipment of foundation be avoided in extreme cold weather, and to that end it would be well to get in your supply in the fall. Use your leisure time in winter to nail and paint your hives, put up sections, and prepare other articles ready for the spring rush.

Extra-Long Bee-Gloves

Having made arrangements for our supply of gloves from a factory making a specialty of their manufacture, we save enough in the cost to enable us to offer them either with or without fingers at 35 cts. a pair; by mail, 42 cts.

No-Drip Shipping-Cases

Don't allow your Comb Honey to be sold at low prices on account of poor Shipping-Cases. Put your crop into Root's No-Drip Cases and it will reach the market in perfect condition, thus bringing satisfactory returns. Our Cases are made of selected basswood, with 2 or 3 inch glass front, which shows off the honey to the very best advantage. Below is a condensed price-list. Complete prices and particulars are found in our general catalog.

Shipping-Cases. Name and Size of Case.	Nailed each.	Price complete including 3-in. glass one side, nails and paper, in flat. 1	10	100	With 2 in glass instead of 3—per 100.	Without the glass, per 100.
12-in. 4-row for 4¼ section	30	25	2 00	$18 00	$17 00	$16 00
10-in. 4-row " "	30	25	2 00	17 00	16 00	15 00
12-in. 2-row " "	20	15	1 30	11 00	10 50	10 00
10-in. 2-row " "	20	15	1 20	10 50	10 00	9 50
16-in. 2-row " "	25	18	1 50	12 00	11 50	11 00
8-in. 3-row " "	20	15	1 30	11 50	10 75	10 00
6¼-in. 3-row " "	20	15	1 20	11 00	10 25	9 50
7⅛-in. 4-row for 4x5 "	30	22	1 80	16 00		14 00
7⅛-in. 3-row " "	25	20	1 40	12 00		10 50
9¼-in. 4-row for 3⅝x5 "	30	22	1 80	16 00		14 00
6¼-in. 3-row " "	25	20	1 40	11 50		10 00

The Simplex Jar

The handsomest glass package on the market. It's a package you need not be ashamed of, and will find its way beside the finest of the grocery shelves. Create a demand for your honey.

This is a new jar with glass screw-top and rubber gasket fitted to the taper screw on jar, which seals absolutely air-tight. Put up in re-shipping cases of 2 dozen jars each, with corrugated protectors.

Price $1.10 per case; 6 cases @ $1.05; 20 cases or more @ $1.00.

5-Gallon Square Cans

The above cut shows the favorite package for shipping extracted honey. There is no shrinkage and consequent leaking; no taint to the honey from wood, as is so frequently the case with barrels and kegs. The cans, being made square, economize space, and are easily boxed. They are used exclusively in the far West. Take 4th class freight-rate

PRICE LIST OF SQUARE CANS.

No. in a box.	Capacity of each can in gallons,	in honey.	Price of 1 box.	10 bxs.	Wt. of 1 box.
1	5-gal. can boxed	60 lbs.	$ 55	$ 5 00	10 lbs.
2	5-gal. "	60 "	85	8 00	15 "
10	1-gal "	12 "	1 50	14 00	20 "
12	½-gal. "	6 "	1 50	14 00	20 "
24	¼-gal. "	3 "	2 40	23 00	25 "
100	1-gal. "	12 "	11 00	105 00	110 "
100	½-gal. "	6 "	9 00	85 00	80 "
100	¼-gal. "	3 "	7 00	65 00	60 "

Porter Bee-Escape

The great labor-saver. No well-regulated apiary can afford to be without it more than a smoker.

Price 20c each; $2.25 per dozen, prepaid.

Price with board, 35c; $3.20 for 10, not postpaid.

The A. I. Root Company, MEDINA, OHIO

BRANCHES

Chicago, 144 E. Erie St. Philadelphia, 10 Vine St. New York, 44 Vesey St.

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GEORGE W. YORK, Editor | CHICAGO, ILL., SEPTEMBER 7, 1905 | Vol. XLV—No. 36

Editorial Notes and Comments

Forcing Honey to Granulate

Mr. S. T. Pettit, one of Canada's oldest and foremost bee-keepers, sends us the following on forcing extracted honey to candy or granulate:

Dear Editor York:—The time to force the candying of honey will soon be upon us again.

Allow me to say that the two most puissant factors in the process are *change of temperature* and *agitation.* I am not sure but I would be safe in saying that the former is the stronger factor of the two.

A good many years ago I had an excellent opportunity of taking lessons on this subject. When delivering honey to the trade, it went in groceries, some of which were poor, thin-walled, wooden structures. Others were of substantial, thick brick walls. And invariably the honey in the thin, open, wooden buildings candied first. Observations all along down the years confirm that statement.

In those days most of our honey was marketed in glass, and so the observations were easily made.

I would generally take the start of the grocer, who, in most cases, would be inclined to question the purity of the honey when it began to candy, by saying something like this: "O, your honey is candying beautifully, is it not?" Then a little friendly talk and explanation would follow, and in that way I would win confidence, educate, and do business, always striving to popularize candied honey.

It has been an uphill job, but all who have worked in that line are going to win.

S. T. Pettit.

Where it is possible to develop a demand for granulated extracted honey we think it is an excellent thing to do. And to be able to compel the granulation of extracted honey is also a fine thing.

Personally, we may say that we have never taken very willingly to the granulated-paper-bag honey, but we may have been wrong about it. If so, it is not the first time we have been mistaken. We believe that some bee-keepers are doing better by working up a demand for granulated or candied honey. Surely it has many advantages. It doesn't leak, nor spill out if the package is tipped over when uncovered. Then there are many people who prefer to eat honey granulated. And those who prefer it liquid can have it so in a few minutes by applying a little heat.

By changing the temperature and shaking up the honey, Mr. Pettit says its granulation will be hastened. Good thing to know that.

◆

Food Offered to Queen or Demanded?

The orthodox belief is that the worker-bees are eager to offer food; that iconoclast, Arthur C. Miller, says the queen makes demands. Confirmatory of his view is an article in the Irish Bee-Keeper containing the following passage:

"In 1903 we had some experiments which showed that a queen introduced into a glass-covered box with one strange bee, proceeded to demand refreshment. If obtained, all was serene, but if refused the delinquent worker was immediately killed. This suggested that the battling of queens begins by a general refusal to supply food, and a consequent running amuck by the strange queen."

Further on mention is made of a queen which applied to a worker for food, "and, upon being refused, made a threatening movement which was answered by protrusion of the tongue."

◆

Rules for Grading Honey

The following letter is from the manager of the St. Croix Valley Honey-Producers' Association:

St. Croix Co., Wis., Aug. 4, 1905.
George W. York & Co.

Dear Sirs:—The last American Bee Journal reminded me that it might interest you to see our rules for honey grading, etc. Out in Colorado the bee-keepers have adopted a set of rules which we believe suits the white clover and basswood localities first rate, and is better than any other grading rules that have come under our observation. All our members (now about 200) are following them. They are simple and easy to follow. Our experience is that the more grades the poorer each grade will be.

Your last issue (Aug. 3) is worth its weight in gold. Honey-production isn't the only thing for the bee-keeper to look upon. Marketing, with us, is the paramount question. If bee-keepers would grade alike, and honestly, how easy it would be to move honey.

Yours truly,
Leo F. Hanegan, *Manager.*

The Colorado grading rules referred to are as follows:

COMB HONEY RULES.

No. 1.—Sections to be well filled and capped, honey white or slightly amber, comb white *and not projecting beyond the wood*, wood to be well cleaned; cases of separatored honey to average 21 pounds net per case of 24 sections, with a minimum weight of not less than 20 pounds for any single case; cases of half-separatored honey to average not less than 21¾ pounds net per case of 24 sections, with a minimum weight of 20¾ pounds for any single case; cases of unseparatored honey to average not less than 22½ pounds net per case of 24 sections, with a minimum weight of 21½ pounds for any single case.

No. 2.—Includes all amber honey of a pronounced tinge, and all white and amber honey not included in No. 1; *to be fairly well sealed, uncapped cells not to exceed 50 in number* exclusive of the outside row, wood to be well cleaned; cases of separatored honey to average not less than 18 pounds net per case of 24 sections; cases of unseparatored honey to average not less than 19 pounds net per case of 24 sections, cases of unseparatored honey to average not less than 20 pounds net per case of 24 sections. Cases weighing over 25 pounds go in No. 2 grade.

EXTRACTED HONEY RULES.

Extracted honey shall be classified as white and amber, shall weigh 12 pounds per gallon, shall be perfectly free from particles of wax, and shall always be marketed in new cans. All rendered honey, whether obtained by solar heat or otherwise, shall be classed as strained honey, and not as extracted.

RECOMMENDATIONS.

It is recommended to sell all cull honey around home as much as possible; to grade only in daylight, near a window.

Pack all sections in stout basswood *no-drip shipping-cases;* to put paper above and below sections; to store honey in a warm, dry room well protected from flies and dust; if the heat of the room causes the wax-moth to become troublesome, treat the honey to the fumes of bisulphide of carbon; to haul carefully, well-protected from dust and rain; *do not nail covers on tight*, as it often becomes necessary to remove them in order to inspect honey or remove a broken section; *do not put any names or marks on cases except grade marks.*

We prefer to pack eight 24-pound cases in a large crate, first putting about 4 inches of straw in it. This will act as a cushion, and prevents breaking down of the combs from jarring or jolting. The glass fronts of the cases should show through the crate so that freight handlers can easily see what it is and handle accordingly. Then there should be two long strips nailed near the top of the sides of the crate (one on each side), and extending out 6 or 8 inches, forming handles by which to carry it. Another good thing is to tack on top a large card having on it in plain letters: "Comb Honey, Handle with Care." When so prepared, comb honey should go almost anywhere by freight in good condition.

The most popular packages for extracted honey are the 2-pound friction-top can, 5 and 10-pound friction-top pail, 60-pound square can boxed, one or two cans in a box, and the 60-pound, round, flat-top can with a veneer jacket, bail for handle, and a 3-inch screw cap in the top.

Under "Comb Honey Rules," where it says "cases weighing over 25 pounds go in No. 2 grade," Mr. Hanegan adds:

"Unless otherwise fancy. As a rule, heavy cases are non-separatored goods, and are heavy because many sections are fat or bulged, and rough more or less, causing leakage."

Also, the paragraph under "Recommendations," Mr. Hanegan would begin with the words, "*For local shipping*, we prefer," etc.

A Big Texas Honey-Yarn

A story in the Youth's Companion, telling some things about vast quantities of wild honey down in Texas, causes a member of the American Bee Journal family to write:

"I would like to know whether honey made by wild bees is really produced in the United States in the large quantities stated. If so, it would be an item of great interest to honey-producers."

A river—Double Mountain River—flows through a canyon for 30 miles, according to the story, and—

...."the entire canyon was one vast apiary, where wild bees have existed and gathered sweets for centuries. They are in such numbers as sometimes on certain bright days to resemble clouds high up the crags, and they fill the canyon with a voluminous hum." "There were hundreds of these wild-bee colonies, whose enormous masses of comb and honey were adhering in sheltered chasms and beneath overhangs of the rock. A number of caverns, too, extending far back into the cliff, have been utilized as great storehouses of comb by the bees. Not one swarm alone occupies such a cave, but 50 perhaps, or 100 swarms, each having its own queen, but all using the mouth of the cavern as a common entrance." Two men made a business for years of harvesting the product, and "it was their custom to send a wagon-load of honey and wax down to the railroad station, 30 miles distant, once a fortnight, and sometimes in good weather once a week."

Really, there is nothing new in this; it's the old story that has been going the rounds of the press, only in the present instance it has the redeeming feature that it is given as fiction, not fact; yet it seems a reputable story-writer might come a little nearer to originality of conception.

There is, however, a fresh touch given to the picture in one spot: "But the most copious stores were at greater heights, 200, and even 300 feet above the river-bed. When seen from below, the mass of comb looked no larger than bacon hams, but when reached was found to amount to several barrels of honey." How's that? Think of a ham-shaped mass containing several barrels of honey, and all hanging out exposed to full sight!

As a matter of fact, no bee-keeper has ever found any such bonanza in Texas any more than in New York, and the story could as well be told of New York as Texas, only that parts of Texas are as yet less known.

"The Honey-Money Stories."—This is a 64-page-and-cover booklet, 5¾x8½ inches in size, printed on enameled paper, entitled, "The Honey-Money Stories." The cover has a picture of a section of comb honey, 3½ inches square, the comb being in gold-bronze, which gives it a very attractive appearance. Then on the gold-bronze comb are printed these words: "From Honey to Health, and from Health to Money."

It is edited by Earl M. Pratt, and contains a variety of short, bright stories interspersed with facts and interesting items about honey and its use. The manufactured comb honey misrepresentation is contradicted in two items, each occupying a full page, but in different parts of the booklet. It has in all 31 halftone illustrations, nearly all of them being of apiaries or apiarian scenes. It also contains 3 bee-songs, namely, "The Hum of the Bees in the Apple-Tree Bloom," "Buckwheat Cakes and Honey," and an entirely new one, called, "The Bee-Keeper's Lullaby." This last song has not been published before. The songs alone ought to be worth more than the price of the whole thing.

It is a booklet that should by placed in the hands of everybody not familiar with the food value of honey, for its main object is to interest people in honey as a daily table article. It is thought that it will be just the thing to sell on railroad passenger trains, on news stands, etc. The stories and items are all so short and helpful, and the pictures so beautiful, that it likely will be kept by any one who is so fortunate as to get a copy of it. Its postpaid price is only 25 cents, but the health-value of its contents would run up into dollars. We mail 5 copies for $1.00, or club it with the American Bee Journal—both for $1.10. It would be very nice for a gift to a friend. Send us a six months' *new* subscription for the American Bee Journal with 50 cents, and we will mail you a copy of "The Honey-Money Stories" free as a premium.

Miscellaneous News Items

The Bee-Hive is the name of the official organ of the Maccabees of the world. It is published in Michigan. At the head of an advertising circular its publishers are sending out there is a picture of a section of honey 2⅜ inches high by 5½ inches wide, on the comb of which are three bees, and the following suspended sign:

"How doth the little busy bee
  Improve each blessed minute,
He gathers honey all the day
  Because there's money in it."

All right except there isn't much money in the honey gathered by the "*he*" bees. Like the Indian squaws, the "she's" do the work of the field and the hive.

A Daily Colony-Record.—On the first page appears a picture of a colony of bees on scales, and also a view of comb honey, both belonging to Geo. H. Kirkpatrick, of Kalkaska Co., Mich. He also furnishes the following in reference to them:

The 37 sections of comb honey shown are a little more than one-third of the product of one colony, the colony filling 90 sections. The method of procedure was as follows: June 1, 1904, I placed over a colony in an 8-frame Langstroth hive a super containing 30 sections, 3⅝x5x1½; on June 10 I shook the colony into a shallow hive which contained 8 frames, 7⅝x16¼ inches, the same having starters about one inch deep. At the time of the shaking the super was removed from the parent colony and placed on the new hive over a queen-excluder. The brood-chamber of the parent colony was then placed on the new hive above the super where it remained for 8 days, when it was removed and a super added. A few days later a third super was given. The 90 sections averaged 15½ ounces.

I have had 22 years' experience in bee-keeping. The method of "shook" swarms is a very good one for comb honey. The present season (1905) I have worked 30 colonies on the O. H. Townsend method of producing both comb and extracted honey in the same super, with very good results. I shall plan to have a goodly number of combs drawn from foundation in shallow frames during the flow this fall, to be used in comb-honey supers next season. This being the first time the dimensions of my brood-frame have appeared in the American Bee Journal, I will not be surprised to see it criticised. For 6 years I have used this shallow frame, and now have more than 200 colonies on it. Having so many good points in its favor, we are discarding the Langstroth frame.

A DAILY COLONY-RECORD.

For 20 years I have placed on a scale a colony during the harvest of white honey. It affords me much pleasure to note from day to day the gain in pounds of honey. By placing an average colony on the scales one can easily estimate the amount of honey stored per day in the apiary.

I find here in northern Michigan, where the bees are gathering from red raspberry from 6 to 10 pounds per day, the shrinkage is about one-seventh. This is much less than the shrinkage of basswood or clover. I find basswood shrinks about one-fourth, and clover one-fifth.

The following figures represent my average per colony, spring count, in the home apiary for a period of five years, beginning with 1900:

Year.	No. Cols.	Aver. per Col.
1900,	45	107 lbs.
1901,	56	126 "
1902,	93	103 "
1903,	126	109 "
1904,	130	61 "

The net annual yield per colony for a period of 5 years was 101 1-6 pounds.

A daily colony-record beginning June 4, 1901, and closing July 17, showed the following, the scale being balanced June 4, at 76½ pounds:

	Lbs.	Gain.		Lbs.	Gain.
June 5,	78½	2	June 27,	258	7
" 6,	81	2½	" 28,	263	5
" 7,	84¾	3¾	" 29,	267½	4½
" 8,	89¾	5	" 30,	270	2½
" 9,	96	6¼	July 1,	273½	3½
" 10,	103	7	" 2,	277½	4
" 12,	119½	16½	" 3,	280	2½
" 13,	130	10½	" 4,	284	4
" 14,	144	14	" 5,	290	6
" 15,	148	4	" 6,	295	5
" 16,	151	3	" 7,	302	7
" 17,	156	5	" 8,	309½	7½
" 18,	168½	12½	" 9,	316	6½
" 19,	178	9½	" 10,	322½	6½
" 20,	196½	18½	" 11,	326	3½
" 21,	214	17½	" 12,	329½	3½
" 22,	225	11	" 13,	333	3½
" 23,	234	9	" 14,	335	2
" 24,	240	6	" 15,	334½	—½
" 25,	245	5	" 16,	335	½
" 26,	251	6	" 17,	337½	2½

From the above colony I extracted 244 pounds. GEO. H. KIRKPATRICK.

Dividing "Stands."—In one of our exchanges we read of a bee-keeper who "divided 4 stands," and "now has 8 strong stands that are working in the supers." Let's see, a "stand" is the frame or base on which the bee-hive rests, thus keeping it raised from the ground. So a certain bee-keeper divided 4 of such stands and afterward had 8 stands working in the supers. Wonder how he got a "stand" into a "super!" And also how he induced a "stand" *to work there!* Perhaps some one can explain.

Contributed Special Articles

Importation of Bees by Our Government

BY PROF. A. J. COOK

I AM sure that all the most enterprising bee-keepers of our country read with a thrill of pleasure that at last our Government had decided to send to the Orient in search of new races and species of bees, in the hope that we might reap advantage from their introduction. There has been for years a desire among our best bee-keepers that something might be done in this line. Mr. Benton, from his wide and successful experience in the past, is probably the best equipped man for this service in the whole world. We may hope that in the introduction of the Macroapis, and very possibly other species or natural races of the genus Apis, we shall gain a substantial advantage.

There are two ways that we may hope for improvement. We may reasonably expect an additional amount of honey. This is probably what has influenced those who have been urging for years the introduction of Macroapis dorsata. But there is another even more important advantage possibly to be gained in the introduction of new races. We know that we need the common native bumble-bee to aid us in securing a full seed-crop of red clover. We know that the scarcity of bumble-bees in the early season makes the first crop of red clover worthless in the seed-production. But do we know that we ever get a full crop of this valuable seed? Is it not more than probable that with more extensive cross-pollination the red clover might always seed better and give a fuller yield?

In the introduction of new races and species, we will very likely not only secure nectar that now goes to waste, but we will quite likely introduce bees that will work on flowers now unvisited, and in so doing will greatly appreciate production. The farmers of Illinois and Iowa are jubilant over the fact that through the breeding of a better kind of seed-corn, their crop is materially increased the country over, for this means millions of dollars to the country each year. A very slight increase in seed-production of any of our valuable stable crops would have like influence. It is just here that this matter of cross-pollination should appeal to us all, and should make us the ready advocates of just such enterprises as the Government has now undertaken in our behalf.

STINGLESS BEES.

It comes to my knowledge that there is some talk of the introduction into our country of species of Melipona and Trigona—the stingless bees of Mexico, Central and South America. I am greatly in favor of the carrying out of this project. I have very little faith that these bees will ever become a matter of commercial importance in the production of honey. I also am absolutely without faith that these bees will cross with our present bees, and so give us an improved hybrid. They are so absolutely different in anatomy and physiology from Aphis that we can hardly hope for a successful cross. Indeed, I have no expectation that this can occur. But the point I made above, that a greater variety of bees will cause more visits to more flowers, I think may safely be depended upon.

There can hardly be a question but what cross-pollination will be more generally effected with every increase of species of bee among us. In our massing of great numbers of plants we have so broken in upon the equilibrium of Nature that we can not be too intent in reaching out to effect in every possible way a greater amount of cross-pollination.

A tremendous gain has been made in the scattering of apiaries throughout the land; may we not hope for a close second in importance in the introduction of new species and varieties of bees now foreign to us? Thus it was that I was pleased to learn from Dr. E. S. Phillips, of the Agricultural Department, that an effort was being made to induce the Government to introduce these stingless bees from the region south of us.

GOVERNMENT APIARY AT WASHINGTON.

I am sure our readers will be glad to learn that one of the prominent features on the fine, beautiful lawn of the Department of Agriculture at Washington, is a handsomely arranged and quite large apiary. Does it not show great good sense on the part of the Department of Agriculture to recognize the importance of the honey-bee, and the value which comes from very numerous apiaries scattered throughout the country? What could the Government do to show more surely its hand in these matters than the putting of this apiary where every visitor of the Department must see it as he approaches the main building? I acknowledge a little more pride, happiness, and patriotism, as I noted this index of broad-mindedness at our capital.

DEPARTMENT OF AGRICULTURE.

I greatly doubt if any department of the Government receives more hearty commendation from other countries than does the Department of Agriculture at Washington. I feel equally sure that there is nowhere else in the world a more able body of honest, unselfish, efficient investigators than may be found in this Department of our Government. The research work being carried on is of the very highest order. The results already gained are of tremendous importance in an economic way to our people. This research work is being carried on in a very broad way. Empirical methods are giving way to scientific processes, and the results that are being obtained are in many cases fairly revolutionary. I have rarely ever enjoyed more satisfaction, or experienced better appreciation of genuine service than I have felt the last few days as I have gone through the various departments and noted the magnificent work that is being turned out here.

SECRETARY JAMES WILSON.

Not a little of the excellence just referred to comes from the fact that we have a grand type of a man at the head of the Department. Brought up on a farm, Secretary Wilson is thoroughly alive to the obstacles and necessities of the farm. He is thoroughly in sympathy with the man with the plow, and is intensely interested in whatever will make the work of the farm more pleasant and productive. Those who know him best are fully persuaded that his honesty and disinterestedness fully equal his longing to make the Department in the highest degree efficient. He has worked very successfully to get the very best men to be found throughout the world to take charge of this valuable research work. As suggested above, these men have rare qualifications for the difficult tasks which confront them.

It is exceedingly unfortunate that the idea of "graft" in the Agricultural Department has so recently come to the front. It is the general belief of those who are best prepared to judge that the men in this work, and some of those who are under censure, are really philanthropists. It is also believed that they are absolutely innocent in the matter charged against them. We have all been very pleased and grateful for the discovery by Prof. Moore. We have appreciated the fact that the value of this discovery came to us as a free gift. I am glad to report that in my talks with those who know Prof. Moore best, I have found a universal belief that he is absolutely innocent of any intention to wrong the Government.

There is no doubt at all but that these matters will all be probed to the very bottom. Surely, no one in the country can be more interested than Secretary Wilson and the President, that every department of our Government should be absolutly clean. We may rest assured that no guilty man will escape. I feel very certain that the number of such will be found very small. Indeed, the work of the scientist tends to preclude peculation. In the meantime, let us all withhold judgment and do our part to prevent these aspersions which are as mischievous as they are uncalled for.

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"How Bees Build Cells with Exactness"

BY ARTHUR C. MILLER

IN the American Bee Journal for July 6, there appears an article by G. M. Doolittle, which contains the following remarkable statements:

> "The question is asked, 'How can so many insects occupied at once on the edge of combs where it is dark, as in a bee-hive, concur in giving them the common curvature from one extremity to the other, as is found in the comb of the honey-bee?' It is supposed that this direct mathematical work is done by actual measurement, as each bee has a square or rule to measure by, in the shape of the antennæ. All who have observed the antennæ of the honey-bee know that there is a joint in each, out toward its end. In building worker-comb, which is 5 cells to the inch, this joint is closed like a jack-knife, so that when the antennæ thus closed are straightened out on each side of the head, the folded joints just touch the walls of the cell, and thus each bee is enabled to work in harmony with every other bee in the hive,

and we have every cell of worker-comb as nearly exact as the average carpenter can make a duplicate of the work of another carpenter.

"In building drone-comb the antennæ are straightened out fully straight, so that they touch the walls of the cell when fully extended at the extreme outside points, and by so doing larger cells are made, or those numbering 4 cells to the inch, which is the size of cells in drone-comb; and these are as uniform as to size as are those of the worker-pattern. In this we see the wisdom of a kind Providence, which placed within the bee an instinctive capacity as great, according to its wants, as is the reasoning capacity in man."

Nothing could be further from the facts. If the bees were dependent upon the two sections of antennæ as described by Mr. D. for the measurement of their work, they would be sorely handicapped, for their are several dimensions to the cells besides distance between parallel walls. Also, there are the accommodation cells which lie between drone and worker comb, and between comb and its supports, cells in curved and crooked combs, all of which vary from any regular comb cells.

These facts should be enough to make any one pause before hazarding the theory of a two-section measure on the bee's head. There is, however, a still more palpable reason for discrediting the statement made, and that is, that the bees do *not* have a folding joint near the outer end of the antennæ. The antenna of a worker consists of 12 sections; the first section called the scape, which is the part next to the head, and is about a third of the length of the whole. The other 11 sections make a slightly flexible rod known as the flagellum. The only place in which the antennæ can be folded, or even bent to an angle of any consequence, is at the junction of the scape and the flagellum. So slight is the movement between the sections composing the flagellum that the ordinary observer considers it a simple straight rod. The antenna is articulated to the head by a sort of ball-and-socket joint which gives it great freedom of movement.

There are also other facts which are at variance with Mr. D.'s statement. The total spread of a worker's antennæ is approximately three-eighths of an inch, while drone-cells are only one-quarter of an inch wide. The total spread between the ends of the scapes—the only place where the antennæ can be folded—approximates but an eighth of an inch, while a worker-cell is one-fifth of an inch wide.

Furthermore, bees when at work do not use their antennæ spread out, but the two tips are brought close to the material the mandibles are working—a fact plain to the most casual observer. Providence Co., R. I.

Odors Among Bees—Some Experiments

Translated from "The Bulletin de la Societe Romande D'Apiculture"

BY C. P. DADANT

(Continued from page 567)

On April 25, my colony No. 11 had already a number of hatched drones, and it was this one which I selected for the first experiment. After having carefully washed my hands two or three times over, so as to remove odor entirely, I caught about 10 drones at the time of their return to the hive. The pulp I made out of them by crushing them was used in rubbing my hands and wrists; then, immediately afterwards, I proceeded to open the hive without smoke and without jar, doing nothing that might stir the bees to an investigation. The result was beyond my expectations; not only I was not stung, but the bees ran over my hands as on their combs, without any hostile demonstrations. The visit lasted half an hour, and it was only towards the end of this time that the bees began to show signs of disquiet and intentions of stinging. I had found there a very good apifuge, and at low cost.

The same experiment, repeated the following day with colony No. 5, gave the same results, only this visit was shorter, for I had another project to put in action. After having closed the hive, and revived the smell of its drones on my hands by crushing a few more, I immediately opened another hive, No. 7—a colony of common bees of remarkable gentleness. What I had foreseen happened: as soon as the hive was opened, and my hands came in contact with the insects, I was assailed and stung about 20 times in the space of a few seconds.

April 29, No. 12 was again visited without stings; then doing as I had done three days previously I opened No. 17, but even though I used a little smoke, as is usually done, I was copiously treated with venom by the irritated insects.

These experiments were repeated the following days on other colonies, and the results, although not always as conclusive, were nevertheless satisfactory. Some trials were, however, completely negative—a fact which I believed must be attributed to causes which I will mention further.

At several times, after having visited a colony with the greatest success, I moistened my hands (but without having previously washed them) with juice of drones taken from some other colony which I intended to examine also. But whether it was the first odor which irritated the bees, whether it was the mixture of the two odors, or something else still, I do not know, the stings were always numerous. It was only by washing my hands carefully between the visits to each hive, then giving them the odor of the colony to be visited that I could manipulate the insects without being rewarded by a number of stings.

We must conclude from this that the bees, like ants, have a perspiration of a particular nature, also similar to that of ants differing in odor from one colony to another, and that it is this odor which guides them, especially when they try to recognize one another.

When bees are taken from any hive, washed with greatly diluted alcohol (which may be done easily by taking them by the wings), and returned to the alighting-board of their own hive, they are not accepted; several have even been killed, under my eyes. If after having washed them with alcohol they are washed with the juice of drones from another hive, and presented to the bees of that other hive, they are always welcomed there.

I had gone this far with my trials, when an absence of 10 days caused me to interrupt them. It is useless to tell you that, during that time, I was constantly thinking about the experiments made, and the fruits that might be reaped from them. It came to my mind to try whether, in proceeding thus, it would not be possible to introduce into the colonies some fertile queens.

So, May 20, I began again with the determination to sacrifice a few queens, if necessary, in case my trials were unsuccessful. Those queens would, after all, be easily replaced, for in my absence colony No. 2 had swarmed unexpectedly, and had supplied us with three young and beautiful queens, lodged in nuclei while waiting for something better.

Towards 2 p.m. I removed without trouble the 2-year-old queens of Nos. 19 and 25. Then after having washed the queen of 19, and having covered her copiously with drone-juice from No. 25, she was placed at the entrance of that hive. At sight of her, the bees made neither happy nor hostile demonstrations, and she passed among them and entered the hive.

The same operation was made with the other queen, and scarcely any bees noticed her entrance. These 2 queen changes had lasted only about an hour, and the bees did not seem to notice that they had been at any time queenless.

Until then all was well, but what was to be the fate of those 2 queens? I could not make sure of this until the following day. That day, as well as several following days, the weather was bad, so my visit had to be put off till the 25th, that is 5 days after the exchange. But in visiting these 2 hives at that time, I had the satisfaction of noting, *de visu*, the presence of the 2 queens in the hives. They had therefore been accepted without any difficulty—nay, the bees had not noticed the substitution. The laying was not even interrupted, for there were eggs in both hives which could only have been laid by the new queens.

At the time of putting into winter quarters of those 2 colonies, the populations were vigorous, and I have no doubt that they fared well through the winter.

My exchanges of queens were limited to this trial, in spite of my intention of continuing them, for I still had many points to examine. How did the queens and the bees disport themselves, an hour or a few hours after introduction?

I have said that it happened to me to be stung in spite of the drone-juice with which my hands had been rubbed. This happened first on a day when the wind was blowing violently, probably rapidly removing the smell from my hands. The same thing happened in very hot days, when the bees were naturally ill-disposed. There is therefore room for more experiments on this point.

I intend to continue these experiments, as much as my leisure will permit, for I can not hold as absolutely conclusive those made the past summer. But to give them more value, I desire the bee-keepers who may have the leisure, to continue them with me; their co-operation is necessary, for the more numerous the trials will be the better we can recognize their value, and the better we can base our expectations on their utility. If success crowns our efforts, it will be another step towards the successful introduction of queens.

How will the colonies behave that have been drone-laying for a certain lapse of time, or those having had a bad temper? If the method succeeds with one race (my colonies are common bees, or bees mixed with Italians or Carniolans), will it succeed with others? Thus many points are to be examined with the greatest care by a number of trials.

We must not doubt that there will be some failures, perhaps numerous; we would be very fortunate should it prove otherwise. But experimenters must not be discouraged by failures, but must not fail to repeat their experiments, registering carefully the results obtained, together with the atmospheric conditions, the character and condition of the bees—in a word, all that may have influence upon the experiments. It would be well, at the beginning, to make the experiments on fair days with prosperous and quiet colonies, while the bees are at work. Progressively, the experiments may be extended to the different colonies, whether gentle or cross, and in all sorts of weather.

The results obtained will be the more positive, with mutilated experiments, and I am sure that the friendly and devoted readers of our little Bulletin will gladly welcome the communications that will be made upon the subject.

Moudon, Feb. 18 L. FORESTIER.

Convention Proceedings

Report of the Chicago-Northwestern Bee-Keepers' Convention, held at Chicago, Ill., Nov. 30 and Dec. 1, 1904

(Continued from page 617.)

CASH FOR PROOF OF ADULTERATED COMB HONEY

Mr. Dadant—A gentleman over here spoke a while ago. He thought it was not advisable to let people know that there is foundation in combs. The question is only whether we shall allow the people to keep on believing a lie or tell them the plain truth. We do put foundation in our honey. In fact we cannot get straight sections without putting foundation in it. If we explain that we must explain to them we put foundation in the bottom. It is nothing to be ashamed of. Why not tell them that rather than allow them to believe a lie, for fear of telling them that honey-comb is manufactured and sealed over? I have never seen a lady, delicate as she may be, that was not willing to take a piece of that foundation and chew it. If they are willing to do that they are willing to eat the honey that is made on that foundation.

Mr. Horstmann—I think each bee-keeper is responsible for his own neighborhood. I don't agree with Mr. Wheeler. I believe you should explain to them the use of the foundation and why you use it. I will take people right into my bee-house and show them sections before they are bent and put together; show them the strips of foundation before they are put in; show them the machine I use for putting the foundation in, and for fastening it; show them how I fix up the supers; shows them how I put it on the hives; show them the bees working, and then guarantee to everybody that my honey will be absolutely pure. If they find any adulteration I will give them $100, and also pay for the analysis. I want people to be fully satisfied when they buy honey from me that they are getting it pure. I have never had to take any honey to a wholesale house; I have always been able to sell it at home.

Mr. Wheeler—I am afraid I was misunderstood. I have been selling honey a good many years. I aim to sell as much honey with as little work as possible. It would be a pretty hard job for me to explain to every customer who buys a pound of honey all about it, but I tell you one thing that proved to me very strongly that the idea of foundation went against the people. I have used for ten years a split section that showed the foundation on four sides. I put in four sections in a row, put sheets of foundation through the middle, the sheet of foundation running the full length of the section, and when I got ready to case up those sections I pulled the sections out and scraped the foundation off and went ahead and cased it up. A great many objected to that foundation. All they saw was the foundation sticking out. The grocery men say, "I wish you would let me have sections that are not split; my customers object to those split sections." The consequence was I quit for the present using them. It is a very convenient section the best kind of section in the world to get filled out, but I had to cater to the trade and I did it just for that reason, no other, simply because people saw that foundation and they said, "Well, that looks as if it was manufactured; I am a little afraid of it."

Mr. Kimmey—I would like to ask some of these practical men when they speak of foundation drawn out what proportion of foundation is used in honey? I speak now of section honey; such as is produced by Dr. Miller's bees.

Dr. Miller—That will depend largely on the foundation itself.

Mr. Kimmey—Take the thin surplus foundation.

Dr. Miller—I should say that the thin foundation is drawn out perhaps an eighth of an inch.

Mr. Kimmey—I will confess I was one of those persons for two years who firmly believed honey was manufactured—comb honey, everything by machinery. I heard it so often. I knew so many things that I firmly believed the comb honey capping and everything was manufactured. I have found out differently since, but I have found out also that the foundation is manufactured. I can't say it is to the detriment of anybody, and I don't believe in trying to deceive or fool anybody.

Mr. Bacon—When you come right down to it, foundation is not manufactured; it is pure beeswax and is merely pressed out; it is originally made by the bees.

Mr. Kimmey—If you can manufacture the full comb and fill it with the pure article, that is absolutely pure; it is just as good as though made by your bees.

Mr. Meredith—I would like to have Mr. Dadant and Mr. Root give their opinion of how much of the medium or light brood can be drawn out in the shape of foundation.

Mr. Dadant—If you give foundation and the bees are not too much in a hurry they will draw it nearly entirely into comb. There is a great difference in the result between when the bees are in a hurry and when they are not. If they are in a hurry and they have plenty of wax they will add to the foundation without drawing it much. They will always work the foundation over. They have changed the shape of it; they have changed it to suit themselves. They always thin it a little if they have plenty. I suppose you understand that clearly. Of course it is according to the grades of foundation, you have thicker or thinner combs both in the midrib and also in the wall. The first is always the best for comb honey. What we call extra-thin we have always considered the best for starters or sheets in the supers. I think very little of that will go into the cell-wall. It will nearly all remain in the midrib because it is so very thin. Therefore, I want to advise people to use the very thinnest for their sections. But when you come to medium and light brood, it is out of the question to furnish that to people for consumption. You will have a heavy midrib in either case. I am afraid too many people use that and create a sentiment against the foundation. But better have a sentiment against the foundation, which we must all know and acknowledge to be there, than to let them believe that your honey is manufactured comb honey, and sealed over with a hot iron, as so many believe. The great trouble is they don't look and don't rely on their palates. The car-loads of honey that come in from the West are largely responsible for that. It is very nice and white, and it looks as if it had never been on a hive, to anybody who does not know. But anybody who will look at the honey, and anybody who can be told that no two sections are alike, will readily understand that it cannot be manufactured. Because, if we were to manufacture them we could not make every comb different from every other comb.

Pres. York—It has been suggested we write for our local papers. I want to say that a few weeks ago my attention was called to a statement about manufactured comb honey in one of the papers that has perhaps several hundred thousand readers. I wrote the editor asking him to make the correction, and he replied that he believed comb honey was manufactured, but if he found otherwise he would correct it. A few weeks later I received another letter from him saying he had discovered it was not true, and he would correct it. I wrote him at once and thanked him for his intention to make the correction. I also said if he wished I would write him an article, and got a letter in a few days saying he would be glad to have me write an article of eight hundred or a thousand words, and I have just written the article. It may have been a little presumption on my part to offer that, but I think it was all right, and I think the rest of us can do the same thing. Whenever you see anything about honey that is wrong, ask for the correction of it, and offer to write an article.

(Continued next week

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

OLD COMBS FOR WINTERING BEES.

The importance of old comb and long established colony when winter conditions are hard is strongly brought out by Mr. Becker's experience. The old colonies in old hives mostly went through in good order; while of 10 in new hives (presumably new colonies also) only one saw spring, and that perished before spring was over. Between the layers of silk in the bottom of a cell are films of dried stuff that can be used as a sort of food. Although honey is the main food in winter, there still seems to be need of a small amount of nitrogenous food different from honey—and the bees get it by chewing up these films. I think that more than half the reason why a new colony and hive is apt to fare poorly when wintering, is because the number of films in a cell is small, and in too many of the cells none at all. Page 490.

COMB FOUNDATION IN AMERICA AND EUROPE.

Mankind can give bees several laps and yet beat them in the "locality" queerness. Locality Europe and they won't have Weed process foundation. Locality America and they won't have anything else. Perhaps they know more about the Weed process than most of us are allowed to—else know less, and fib against it. Let's see—were we not told once that the Weed process did not work with impure wax? If that is the fact, naturally those European makers, who mostly adulterate, would feel inclined to lie it down. Fifty-seven and a half tons of foundation in one year is certainly a grand record for the Dadants. Page 502.

OLD AND YOUNG BEES IN THE COLONY.

In his article on page 504, Mr. Doolittle starts ideas that are not as familiar to the most of us as they ought to be. We can take away all the old bees of a colony without destroying it. Younger bees will go the fields in their stead. But will they not bring smaller loads and fewer of them—and so the damage to the colony be much greater than we thought? We can take away all the young bees and make the field-bees stay at home and nurse brood. But will it not take twice as many of them to digest pollen enough for a given number of young? Presumably they quit breeding and went to the fields partly because their pollen-digesting powers were failing. And it is known to conduce to poor queens to be reared by old bees.

"SHOOK" SWARMING AND DIVIDING.

The Northwesteners seem to have gotten dreadfully mixed when they tried to discuss "shook" swarming—majority of them talking about some form of *dividing*. Dividing is dividing; and "shook" swarming is "shook" swarming. Nothing is entitled to the latter name unless it is a tolerably close counterfeit of natural swarming. I guess we shall have to be broad enough to admit that there are two kinds. In the closest imitation we manufacture a cluster in a box or elsewise and then carry it away and hive it just as we would a natural swarm. In the less close imitation we carry away the combs and some of the bees, and let the "shook" continue to occupy the old stand. Page 505.

TIME OF BABY-BEES' DINING.

There's a laugh hid in Missouri's Ques. 5, on page 505. What the innocent child really wants to know is the meal hours for bee-babies—whether they dine at 12, like working-folks, or at 5 like aristocrats, or at 9 like the public celebration dinner.

QUEENS LAYING SEVERAL EGGS IN A QUEEN-CELL.

And so a good queen has been known to lay three eggs in a queen-cell—consequently it isn't *always* laying workers that do that sort of thing. Thanks for the evidence, Miss Wilson. Page 507.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Bee-Keeping for Women—When Not Advisable—Success and Failure

But while I thus advocate bee-keeping for certain classes of women, as intimated in a preceding article, I do not advocate it for all women under any and all circumstances. The woman whose time is already taken up with other work should not take upon herself in addition the care of an apiary. This is for both her own and her family's sake, for should she do so she will surely overtax her strength and unfit herself for her higher mission, or she will neglect either her family or her bees. Family and home were meant to, and should, occupy the first place in every woman's heart; therefore she is not justified, unless actually compelled by need or lack of health, to undertake anything which will absorb time and strength needed indoors. For these reasons I do not advocate bee-keeping for women with large families, at any rate unless the various members are able and willing to assist materially.

I say "willing," as well as able, for it sometimes happens that a woman who is favorably situated in every other way, and who has an earnest ambition to engage in bee-keeping, is opposed by husband or some other member of the family because of prejudice against the bees, or for some other reason. Such a woman should not, until she can overcome all opposition by agreeable means, engage in the work. Domestic peace and harmony are worth far more to any woman than anything she would be able to obtain from bee-keeping without them. Besides, much hard work is involved, enough to make it a hard pull alone at the best, and altogether too hard when it must be undertaken in opposition to one's family. In manipulating and cellaring, in extracting and marketing, and at various other times, a woman will find herself hampered by lack of strength or resources; whereas, if the members of her family stand ready to lend her such assistance as they can, both mental and physical burden will be greatly lightened.

But while I have placed a woman's duty to her family and herself above all other things as a barrier to her engaging in bee-keeping, she should also consider that something is due to the enterprise for its own sake, therefore she should not embark in it unless prepared to make it a success as far as she may. But it should first be said that while success or failure affects the standing of any industry, it affects it far less than it does the one responsible. Any one who has attained any measure of success in any line of work, has gained increased confidence in, and greater respect for, his or her ability, and is therefore better able to cope with the problems of life. On the other hand, those who accept failure are made weaker and less capable. Not only does failure degrade one in one's own estimation, but in that of one's neighbors as well. This is possibly more true of women's efforts than of men's, although the same may be said of both. But women, as money-earners, are more conspicuous figures than men, consequently results are more marked and more strongly commented upon. Knowing these things, then, let every woman who goes into the field take with her energy, enthusiasm, and a determination to succeed.

But as said before, success and failure affect the standing of any industry, especially in the immediate locality where it was made. Where one succeeds more will follow, and bee-keeping is an occupation worthy of the efforts of the most capable. Not only is it productive of health, but is capable of bringing into any community where it may be followed extensively, prosperity and comparative wealth. Women are not less responsible than men; let us therefore give to our industry our best efforts, and endeavor to win for it, as well as for ourselves, the respect and appreciation of all observers.

Mrs. Millie Honaker.

Vernon Co., Wis.

The Yellow and the White Sweet Clover

Dear Miss Wilson:—I have had a sort of guilty feeling for some time as the American Bee Journal came to hand so regularly, to think that it is so long since I have had a word to say to my confreres. There has been no lack of interest on my part, and many things have called for comment of one kind or another.

I noticed in a recent number that J. A. Green, of Colorado, says that yellow sweet clover blooms 15 days in advance of the white. I am at a loss to account for the difference between his location and mine. Here there is a *month's* difference in the time of their blooming. The yellow comes into bloom early in June, with perhaps a scattering blossom or two late in May. Here it is about the Fourth of July when the white may be said to be in bloom. I would like to hear from some others who have both kinds.

The bees are rushing things here just now, as they always do when the *heartsease* comes. They are losing no time, consequently I am rushed, too.

I have a nice hammock in the shade, but it is empty most of the time. I am glad to see that the editor gets off occasionally so that he can tell us about the "big men," and, incidentally, have "a good time."

(Mrs.) A. L. Amos.

Custer Co., Nebr., Aug. 16.

Experiments in Wax-Secretion

Experiments reported in L'Apiculteur showed that a swarm of 20,000 bees builds about 1000 grams of comb in the first 4 days. Estimating that ¾ of the bees at work secreting, that makes each bee secrete .0000376 of a pound of wax in a day. At that rate it would take a bee 26,595 days to secrete a pound, or 26,595 bees to secrete a pound in one day.—[These are interesting figures; but another set of experiments might show quite a wide variation from these, owing to different conditions. Different experimenters have arrived at widely different results as to the number of pounds of honey it requires to make a pound of wax, the highest figures being 20 lbs., and the lowest between 5 and 6. But for all that, the general average of experiments of late has been between 6 and 7 pounds. It would be interesting to know how near the figures you furnish are to the general average. Perhaps the new apicultural department at Washington, with its fine corps of workers, will be able to eliminate many of our guess approximate figures, and substitute therefor those that are reasonably accurate.—Ed.]—Gleanings in Bee Culture.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to Dr. C. C. Miller, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Treatment of a Weak Colony—Loafing Bees

1. How will it do to set a weak colony on the stand of a strong one, and the strong one on the stand of the weak one? Or, would it be best to give the weak colony brood and bees from the strong one?

2. What makes the bees loaf so much when there is plenty of buckwheat bloom? They hang out and seem to be lazy. West Virginia.

Answers.—1. In making a weak colony take the place of a strong one, there is some danger that the queen may be killed. It is safer to give brood. Bees may also be given with the brood, but the bees added should not be more than about a fourth as many as the bees already in the hive. A nice way is to exchange frames of unsealed brood for frames of sealed brood.

2. It is not because the bees are lazy, but because they are wise enough not to wear themselves out when there is no nectar in the flowers. See answer to Kansas, page 603.

Swarming Management—Wintering Bees

1. My bees are a quarter of a mile from the house, and I clipped the queens' wings last spring; but being so far away, and not being able to be with them all of the time, I have lost a good many swarms. Another year could I not buy a drone and queen trap for each hive, attend to them every night, and divide what I want for increase, so I would not have to be with them all of the time?

2. Ought I to build a shelter for the bees or will they winter here all right without protection? Colorado.

Answers—1. Yes, it will work. There is danger that some swarms will return to the wrong hives, but that is better than to have them sail off entirely.

2. While it may not be absolutely necessary in your locality, it is well that there be something to break the force of the winds.

Management of Swarming—Size of Brood-Nest—Hives

I started with 2 colonies (in the spring of 1893) in 8-frame hives. I now have 36 colonies, 6 in Langstroth 10-frame, 4 in 8-frame hives, and all the rest in common store boxes with slats and end-pieces to hold the combs. Is it not possible in using the Heddon system in swarming, with these boxes, to get more money out of it in the end than to buy new hives at $2 each, since with this system, as I understand it, there is no need to overhaul the bees to cut out cells or anything of the kind?

I never read anything about bees until this season. Of course I now see where I could have prevented so much swarming, but at the same time I wanted to get into the bee-business, therefore the increase was all right for me.

1. In the shook swarm method (or the other method of hiving the new swarm on the old stand) why couldn't we place the old hive (with all queen-cells cut out) right under the new swarm until the bees have all hatched, then we have a hive for more bees again? This continual increase means *more hives*, and there comes a time when we would like to call a halt.

2. What is the matter with closing the hive tight when the swarm commences to issue, keeping it closed until the bees will not take to wing when released, as described by J. T. Adams in the June 15 issue of Gleanings for 1903?

3. Does the anticipated swarming method of Adrian Getaz, described in the American Bee Journal of June 16, 1904, work out according to schedule?

4. A beginner sees so much in print that seems to be contradictory. For instance: Of course in the early spring we want increase, and lots of it. Some advise a second story to give room for the queen, etc. Then we read what Mr. Danzenbaker has to say in regard to his hive, and one of his strongest claims is just the reverse. He says we need a smaller brood-nest, etc.

Then I read of a lady who keeps down swarming by puffing a little smoke in at the entrance when the swarm commences to issue. This stops the swarming note, she says. Then the next morning she shakes the swarm into a new hive on the old stand and *places the old one in tiers 6 or 8 high on* a strong colony. Very good. Then I read that should you put even one swarm into an old hive with brood, there would not be enough nurse-bees to take care of all the brood, but if you should put 2 swarms into such a hive there would be enough such bees, and such method was advised. Now comes the question, How many bees would it take to care for the *6 or 8 colonies tiered up* over even a strong colony?

5. What would you advise me to do? I am a pharmacist, and therefore can give only a small part of my time to the bees. I can have enough of these store boxes ready for another season without any cost except for paint. Or would it be better for me to buy new hives for another year? I am getting honey, and I have some new colonies which I think will give me 3 supers full, as I have 2 already. I am running for comb honey altogether, and winter the bees in the cellar. Iowa.

Answers.—1. You'll never reach the point where year after year you'll have just enough hives and all constantly occupied. Some extra hives must always be on hand. But that isn't answering your question. You can easily make a trial of your plan, and one trial will probably satisfy you that poor work will be done in an empty hive over the brood. In one case I had a queen thus placed—over an excluder—and she stayed there 3 weeks without laying an egg.

2. I don't know how it would work in your locality, but I feel almost sure the colony would swarm as soon as the oldest virgin could go with them. Mr. Adams says in his locality he has no afterswarms. But if you could control them till all the virgins but one were killed, you might come out all right.

3. When I see the name of Adrian Getaz attached to a statement, I feel I can rely upon that statement. The system he gives is in good repute across the water, and I wonder that it doesn't make headway here. Exceptions to the working of the plan will no doubt occur, just as exceptions occur in the usual manner of shaking swarms.

4. Different views are entertained as to size of brood-nest, but the difference you speak of may be accounted for by the fact that different times are talked about. When a colony is building up for me in the spring, it is impossible to give too much room for a brood-nest so long as it is fully occupied by the bees; but during the harvest it would be ruinous to have unlimited room in the brood-chamber. It would mean not an ounce of comb honey.

A colony covering 8 or 10 combs in winter will laugh at a temperature 20 degrees below zero, while another covering only a single comb would freeze to death. Same thing in summer. Take a single comb sparsely covered with bees, and the brood will be chilled in a little while. Take 8 or 10 such combs together, with the same proportion of bees, and the brood will be all right. When you make a shaken swarm, and put the brood in an empty hive, you may put in so few bees that the brood will suffer. It will of course take more bees to take care of two stories of combs than it will to take care of one story; *but it will not take twice as many bees.* The larger number of such combs you have in a pile, the smaller the *proportion* of bees needed to keep the brood warm. I don't know for certain, but I think there are enough bees in one strong colony to care for the brood in 6 or 8 hive-bodies tiered up. If necessary, the whole field-force could remain in the hive to keep things warm, and some of them might even lend a hand at feeding babies.

5. In getting ready empty hives for next season, have part of them one kind and part the other, and decide from your own experience which you like the better. I should advise that you try only a small part of the store-box kind, only that the cost is so little that you won't mind throwing them away if they don't suit you. And I have a suspicion that they won't suit you so well as the other kind. But don't grumble at me at the trouble of transferring all from the boxes later on.

White and Yellow Sweet Clovers

I have read that there are two kinds of sweet clover, white and yellow, and I would like to know which is the better to sow on ground which is not under cultivation; for instance, waysides, fence-corners, etc. Which of the two varieties is to be preferred as a drouth-resister, and are they also used as forage-plants? My intention is to sow it for the bees, especially on waste ground, but I would like to know for what other purpose it could be used.

I have heard that sweet clover grows like weeds and blooms for a long time during the summer. If this is so, I would like to give it a trial, but would like to hear something definite about the plant before I purchase any seed. Indiana.

Answer.—As to kind of soil and as to resisting drouth, there is probably no difference between white and yellow sweet clover. The chief difference is in the time of blooming, the yellow blooming first. Some say it is two weeks earlier than the white, some say four. As a forage-plant, some esteem it highly, others say it is worthless. It is probably good in all cases where stock have learned to eat it. I have never seen much of the yellow, but from what I have seen I judge it does not grow so luxuriant as the white, and so would not yield so much forage. If you have abundance of white clover, the white sweet clover may be better for you than the yellow, for the white sweet clover comes into bloom before white clover is done.

Reports and Experiences

"Raised" Not "Reared"

On page 555, in my letter on "White Honey Almost a Failure," in next to the last paragraph, it should read, "no brood *raised*" from below to the upper stories instead of "no brood reared," which makes it unintelligible.

B. T. Davenport.

Hard Winter—Fairly Good Yield

Last winter was a hard one for the bee-keeper. About 50 percent of the bees were lost in this part of the State. But spring opened nice and warm, so the bees built up first-rate. Swarming has not been excessive, the clover yield being rather late, commencing about June 20. Up to date I have something like 75 pounds of honey to the colony, present count. I double up all swarms which

I put on new stands and get the best yield from new colonies. The county report as given by the assessor for 1905 for Nemaha county, was 444 colonies of bees. This was taken in April, but at the present time, I think there are from 1000 to 1200 colonies. A very large percent are poorly kept. Few bee-keepers take a bee-paper, and but few take time to look after the needs of the bees.

Our fall yield is not very large, so that we can not expect much honey from now on.

S. C. MAJORS.

Nemaha Co., Nebr., Aug. 7.

Too Cold, Wet and Windy

My report so far this year is blank. We have no honey yet. We have had lots of rain, but it has been too cold, wet and windy. The bees seem to be gathering some the last two days, and the prospect for a fall flow is good.

A. J. FREEMAN.

Neosho Co., Kans., Aug. 23.

Honey Crop a Disappointment

The honey crop here is a disappointment, also basswood. It has been too cool, cloudy and wet during bloom. The fall prospect is not good.

F. A. SNELL.

Carroll Co., Ill., Aug. 31.

Bees Doing Poorly

Bees are doing very poorly here this year. There is no honey in white clover, and if we do not have a fall honey-flow some of us will have to feed our bees. One man reports plenty for the bees and some surplus honey.

C. W. HOPSECGER.

Skagit Co., Wash., Aug. 8.

White Clover Yield Light

The white clover season is practically over, and the honey crop from that source has been rather light.

G. GLEYSTEEN.

Sioux Co., Iowa, Aug. 8.

Too Much Rain

The honey crop is very light here, as it rained too much during the basswood season, and the bees didn't work much on white clover, although there seemed to be plenty of it.

H. HINRICHS.

Jackson Co., Iowa, Aug. 7.

Bees Doing Fairly Well

The last half of July bees did fairly well. They are now working pretty well, but not doing much in the supers. They must be storing in the brood-nest. I lost a few queens on their wedding-trips this season, and replaced them with queen-cells. It has been fearfully hot and showery the past 2 weeks.

W. IRVINE, SR.

Webster Co., Iowa, Aug. 5.

Bees Making a Fair Living—Dry Weather

White clover is all gone, sweet clover is more than half through blooming, catnip is dried up, and bees are working on red clover, of which there is plenty, but they are making only a fair living. My little patch of alfalfa is humming with bees almost as loudly as a good bloom of sweet clover would be.

The comb honey is of inferior grade and a very light crop. Two years ago I got 250 pounds per colony; last year, 62½ pounds per colony, and this year only about 25 or 30 pounds per colony. We need rain very badly. It is awfully dry.

J. E. JOHNSON.

Knox Co., Ill., Aug. 5.

Bees Doing Little Work

Bees have been doing poorly here all the year. I have 6 colonies, 4 spring count, one natural swarm and one shook swarm. They had not gathered enough to live on up to the middle of July. Since that time they have been tolerably busy, and I believe I will be able to harvest about 25 pounds of section honey to the colony, if we have a favorable fall. There was so much cold rain in the spring that lots of bees starved to death. I fed mine until July. Those that I did not feed lost considerable. I have 2 hybrid colonies, 3 blacks, and one Italian.

I am going to Italianize the hybrids and blacks this fall.

W. P. BURCH.

District 16, Ind. Ter., Aug. 8.

Bees Doing Very Well—California Honey

My 26 colonies came through the winter in fine condition, and cast 2 swarms this season. The past 3 years they have not swarmed enough to say so, so I have had to make a swarm now and then. The 26 colonies have now 3 hive-stories, with about 100 pounds of surplus honey to spare.

The weather has been rather cold all summer. I got a queen July 25, introduced her the 26th, and she began laying the 29th. She looks fine, but it is too late to get a test of her this year. The progeny of some of the queens I have are pretty cross, but so long as they get the honey I do not care. This is a cold and often windy country, so they may be gentle enough in some other locality.

When speaking about California honey in a former letter, I did not mean that pure California honey was poor, but that the honey sold in some places for California honey was poor.

O. K. RICE.

Wahkiakum Co., Wash., Aug. 1.

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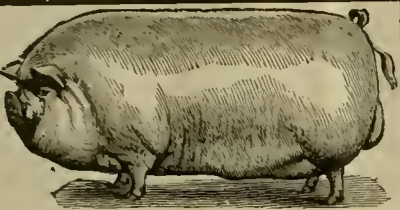

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The headquarters of the National Association will be at the Bexar Hotel (pronounced Baer, long sound of a), corner of Houston and Jefferson Sts., and rates are only $1.00 a day, and up. The convention will be held at Elks' Hall, 125 W. Commerce St., only two blocks from the Bexar Hotel.

Flint, Mich. W. Z. HUTCHINSON, *Sec.*

New York.—The Fulton and Montgomery Counties Bee-Keepers' Society will hold the next meeting on Wednesday, Sept. 20, 1905, at the Central Hotel, Amsterdam, N. Y. The annual election of officers will take place at this meeting, and also two delegates will be appointed to attend the meeting of the State Association at some time during the coming winter, and also any other business which may come up at this meeting. All are invited to come and bring your bee-keeping friends.

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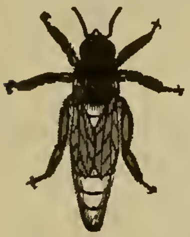

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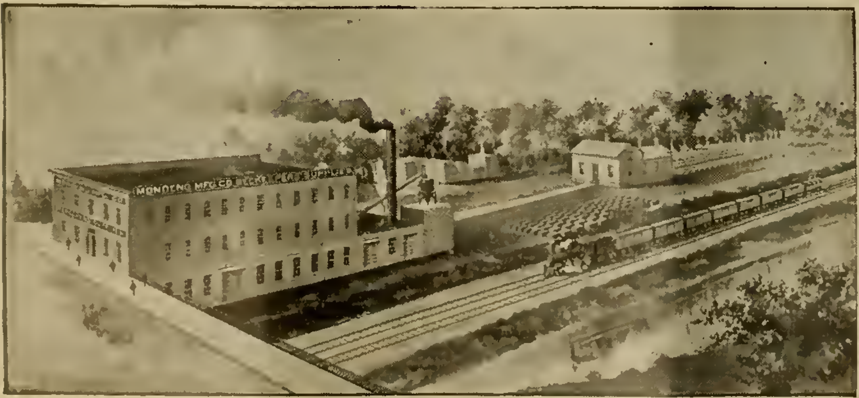
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Honey and ✣ Beeswax ✣

Chicago, Aug. 18 —The demand has absorbed all the offerings of fancy and A No. 1 grades of white comb honey at 14c, while No. 1 has sold at 13@13½c. No call at present for other than the best grade, it really being difficult to place what ordinarily is called No. 1. Extracted, white. 6@7c; amber. light and dark, 5@6c. Bee wax, 28c. R. A. Burnett & Co.

Albany, N.Y., July 26.—There is some call for honey, new crop, and if here would probably sell for best prices of season, as the general impression is there will be a large crop. White comb honey will start off at 15c to early buyers. H. R. Wright.

Kansas City, Aug. 24.—The honey market here shows a decided improvement and the market is firm at $2.85 to $3.00 for No. 1 and fancy white comb in 24 section cases. Amber and other grades are selling for less, according to quality. Extracted in fair demand, white selling at 6½cents; other grades down to 4½c. Beeswax, 28c. C. C. Clemons & Co.

Cincinnati, Aug. 18.—The heavy requests for offers on honey recently, have a tendency to lower the prices. We are striving hard to maintain good prices, by giving our friends more than their honey is worth, to hold up the market. So far we have been successful. Still offer extracted honey as follows; Amber in barrels and cans at 5¾@6½c, respectively. White clover at 7@8½c. We feel that lower prices will prevail in the near future.

Comb honey is coming in quite freely. We quote fancy white comb honey at 12@15c. The arrival of Western car-load shipments of comb honey is anticipated daily, after which the market will be shattered as to prices. Beeswax, 26c. The Fred W. Muth Co.

Denver, June 26.—The demand for both comb and extracted honey is light at present, and there is enough of old stock on hand yet to last until the new crop comes in; the same is selling as follows: No. 1 white comb, per case of 24 sections, $2@$2.20; No. 2. $1.75@$2. White extracted, 6½@7½c per pound. Beeswax, 26c. The Colo. Honey-Producers' Assn.

New York, Aug. 18.—No new comb honey on the market as yet, and very few inquiries so far Extracted is in fairly good demand and we quote: California at from 5½@7c per pound, according to quality and quantity. Southern in barrels from 50@65c per gallon. Beeswax remains steady at 29c per pound. Hildreth & Segelken

Philadelphia, Aug. 21.—Some honey arriving, with prospects of a good crop all through the East, but no call for comb honey during the hot weather, so that prices are not as yet established. Extracted honey arriving freely. We quote as follows: Fancy white, 7@8c; amber, 6@7c. Beeswax, 27c.

We are producers of honey and do not handle on commission. Wm. A. Selser.

Cincinnati, O., Aug. 8.—There is no demand for comb honey on account of the warm weather. Extracted is in usual demand for this season of the year. We quote white clover at 7@8c; amber, in barrels, at 5¼@5½c; in cans, 5¾@6c. Beeswax, 28c. C. H. W. Weber.

San Francisco, Aug. 23.—White comb, 1-lb-sections, 9@10 cents; amber, 7@8c. Extracted, water-white, 5@5¼c; white, 4¾@5c; light amber, 4@4½ cents; amber, 3½@4c; dark amber, 2½@3c. Beeswax, good to choice, light, 27@29c. The market is still very weak, though prices are being well maintained by apiarists, and not without cause, as advices from some of the most important honey-raising districts say that the yield of honey will fall far below the average this year, owing to cool weather during the months of May and June when the wild flowers were in full bloom.

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Until further notice, finest quality new crop California Water-White White Sage and Light Amber **HONEY** in 60-lb. tins, 2 in a case; new cans and new cases. Write for prices and samples, and state quantity you want.

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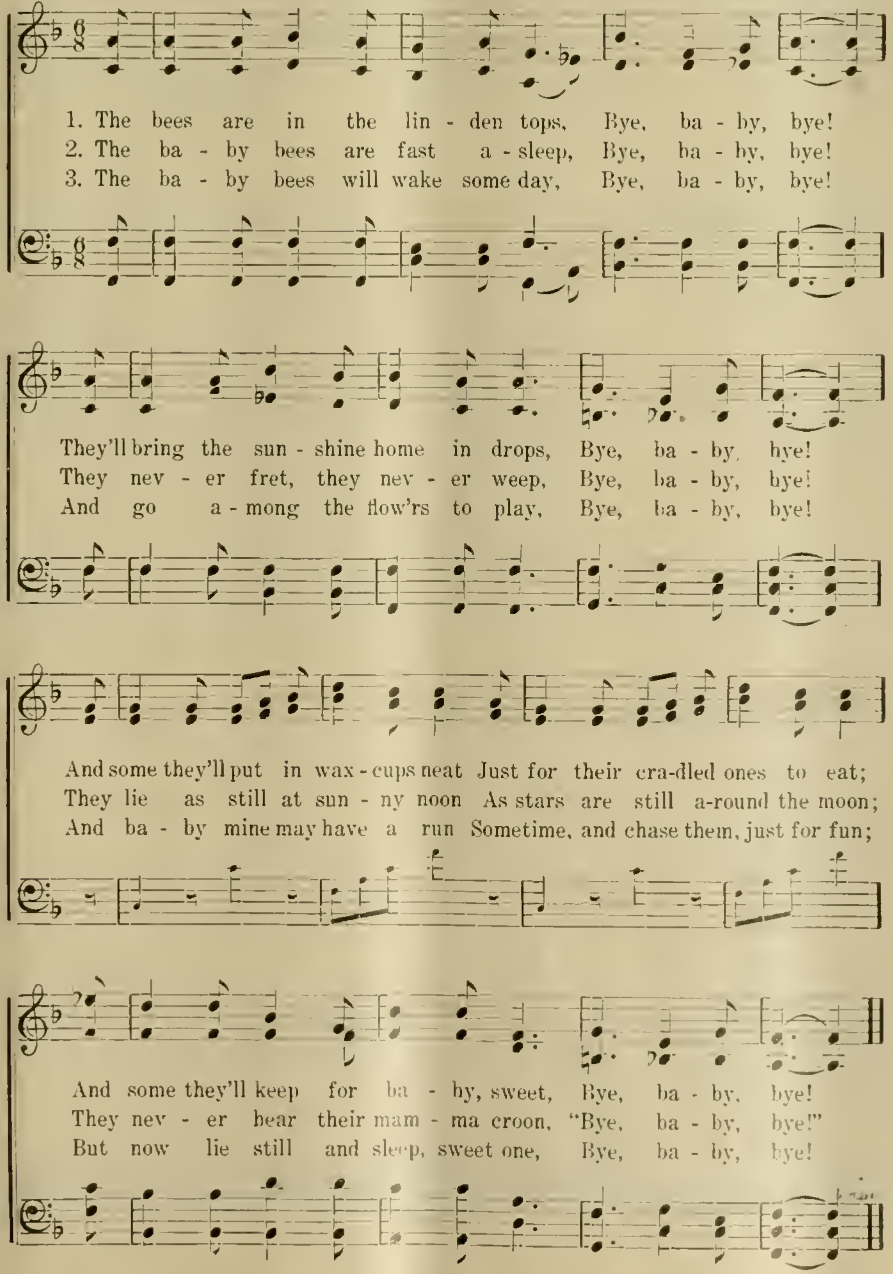
AMERICAN BEE JOURNAL

45th Year CHICAGO, ILL., SEPTEMBER 14, 1905 No. 37

The Bee-Keeper's Lullaby.

EUGENE SECOR. GEORGE W. YORK.


1. The bees are in the lin - den tops, Bye, ba - by, bye!
2. The ba - by bees are fast a - sleep, Bye, ba - by, bye!
3. The ba - by bees will wake some day, Bye, ba - by, bye!
They'll bring the sun - shine home in drops, Bye, ba - by, bye!
They nev - er fret, they nev - er weep, Bye, ba - by, bye!
And go a - mong the flow'rs to play, Bye, ba - by, bye!
And some they'll put in wax - cups neat Just for their cra-dled ones to eat;
They lie as still at sun - ny noon As stars are still a-round the moon;
And ba - by mine may have a run Sometime, and chase them, just for fun;
And some they'll keep for ba - by, sweet, Bye, ba - by, bye!
They nev - er hear their mam - ma croon, "Bye, ba - by, bye!"
But now lie still and sleep, sweet one, Bye, ba - by, bye!

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY

334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

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THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec05" on your label shows that it is paid to the end of December, 1904.

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2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

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(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

MEMBERSHIP DUES

1. Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.
2. Any honey-dealer, bee-supply dealer, bee-supply manufacturer, bee-paper publisher, or any other firm or individual, may become a member on the annual payment of a fee of $10, increased by one-fifth of one (1) percent of his or its capital used in the allied interests of bee-keeping.

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For a limited time we offer No.25 Honey-Jars, porcelain cover, metal screw cap, holding one pound of honey net, one gross in case complete in 5-gross lots, $4.00 per gross; less quantities, $4.50 per gross, f o.b. New York. If you want to secure some, let us know at once.

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FINE QUEENS By Return Mail From my 3 and 5-banded Long-Tongued Italians. Equal to any for honey-gathering and gentleness.

MR. CHAS. M. DARROW, Dear Sir:—The bees and queen received in good condition, only a few dead bees; indeed, it is a fine queen, and the bees are No. 1. Thanking you for the same,
Yours truly, J. J. VOSBERG.
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Select Tested (or Warranted Tested) $1 each. No disease. I guarantee all queens perfect, to arrive safely, and give reasonable satisfaction.

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◆

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Before	October 1....	deduct	10	percent
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"	January 1....	"	7	"
"	February 1...	"	6	"
"	March 1......	"	4	"
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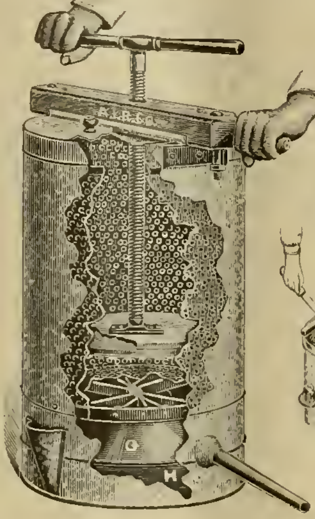
GERMAN WAX-PRESS



Save all of your old comb, scraps of wax and slumgum, and instead of allowing them to become scattered or worm-eaten, or rendered in some wasteful method, put them into a German Wax-Extractor and you will be surprised at the amount of wax you can obtain and profits make. With a German Wax-Press you can get every particle of wax out of old combs. Much of the slumgum from solar extractors and other machines contains a very large percentage of wax that can be separated with our machine. Indeed, some bee-keepers buy up all the slumgum they can, and with the use of a German Wax-Press make excellent profits from what otherwise would have been thrown away.

Our Press may also be used as a honey-press. Loose or broken chunks of honey that are too small for an extractor may be extracted in this Press without application of heat, and the honey be as good as though extracted in the ordinary way. With every Wax-Press we furnish an uncapping arm. This arm, with scraping stick, is slipped over the edge of the can with the basket in place. The cappings drop down into this and are drained. This machine, therefore, serves three purposes, and is almost indispensable in any well-regulated apiary.

The machine is made in the best possible manner. The cross arm is of the best selected oak, and will stand any strain. Bolts projecting through the ends of the arm engage with corresponding ears on the can in such away that a side circular movement instantly releases it.

Before closing I wish to say that Mr. E. R. Root is right when he says, "You can't get over 50 percent of the wax until you use a first-class press for your work." And I want to say when you get a press, buy a German. They are neater, can be used on a kitchen stove, make a fine honey-press and excellent uncapping can, and will be the most satisfactory in the end. I will trade my home-made outfit for one if I ever get a chance. **Perry Orton.**
New York, Aug. 9, 1905.

I am well pleased with the German Wax-Press. Felt that in one day's work it had more than earned its cost. **W. J. Oates.**
California.

I was inclined to believe at first that the German Wax-Press was a failure, but after a thorough trial was well pleased. Secured 30 pounds more wax from one day's use of the machine than I would have secured by the ordinary method of rendering.
Illinois. **B. Walker.**

Wax from old slumgum that had been worked over by another party and declared to be free from wax, I got nearly 50 pounds from only a little over 100 pounds of the stuff. **E. T. Flanagan.**
Illinois.

Cash Discount for Early Orders

We can not remember a year when we were not crowded with orders through the spring months, and somewhat behind, some years more than others. In order to divert some of this trade to the fall and winter months, we have offered inducements in the way of an early-order cash discount. This year we will be more liberal than ever before in the amount of discount allowed. For some months the price of some of the materials used has been a little lower, and we have stocked up heavily, and propose giving you the advantage of the saving in price. The abundant farm crops throughout the country are stimulating trade in almost all lines, and prices are already stiffening. The discounts which we propose to offer for early cash orders are as follows:

For cash orders before Oct. 1......................10 percent.
" " Nov. 1...................... 9 "
" " Dec. 1...................... 8 "
" " Jan. 1...................... 7 "
For cash orders before Feb. 1......................6 percent.
" " March 1...................... 4 "
" " April 1...................... 2 "

You will notice that, after January, the discount drops 2 percent a month; and if we find that advancing prices of materials do not warrant the larger discount, we reserve the right to reduce the amount of discount at any time. Your safest plan is, therefore, to order at once.

This discount is only for cash before the dates named, and is intended to apply to hives, sections, frames, foundation, extractors, smokers, shipping-cases, cartons, and other miscellaneous bee-keepers' supplies. It will not apply on orders for the following articles exclusively; but where these form no more than about 10 percent of the whole orders, the discount may be taken from the entire bill: Tinned wire, paint, Bingham smokers, Porter bee-escape, glass and tin honey-packages, scales, bees and queens, bee hooks and papers, labels and other printed matter; bushel boxes, seeds, and other specialties not listed in our general catalog.

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BEE JOURNAL

(Entered at the Post-Office at Chicago as Second-Class Mail-Matter)

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor

CHICAGO, ILL., SEPTEMBER 14, 1905

Vol. XLV—No. 37

Editorial Notes and Comments

Requeening vs. Shaking Swarms

In an article in the Western Bee Journal (recently discontinued), Adrian Getaz expresses his preference for caging queens or requeening, as against shaking swarms. He says:

> In my locality at least there is nothing better than caging the queens or requeening. I have so far used the last process in preference, but I may change definitely to the other after all. With one or several large apiaries and a locality where a considerable proportion of the colonies are likely to swarm, I would cage the queens throughout a little before the swarming-time. The cage should be placed in the cluster of bees. The queens are then well cared for. Furthermore, the bees are likely to work better than when entirely deprived of the queen. In due time the queen-cells are cut out, and the queens are released a few days later. The condition of success is not to release the queens until the colony has been at least 4 days without unsealed brood.
>
> Exactly how it works I could not tell positively. I think it is this way: During these 4 days or more without unsealed brood, the young bees having no brood to feed, take to the field, and become actually field-bees notwithstanding their age, or rather "youngness," if we can coin such a word. Later on, when the queen begins to lay again, the excess of nurse-bees has thus ceased to exist, and is not likely to occur until the swarming season, or even the honey-flow, is over, and swarming out of the question. It is immaterial if the same or another queen is given; it does not make a particle of difference. Dr. Miller here, and Gravenhorst in Germany, say that it does. That bees allowed to requeen will not swarm again, but if a strange queen is given them they will. I presume that they gave the strange queens too soon, not knowing the condition mentioned above. I would like Dr. Miller to try again, giving due attention to that condition.
>
> The requeening is done about the same way. The old queen is removed and the bees are allowed to requeen. It is best to do it only when good queen-cells are already present, or when the swarm has already issued and is returned to the parent hive. The cells started only after the queen is removed are liable to give inferior queens. Furthermore, the colony is too long a time without a laying queen, and thereby too much weakened.
>
> My two apiaries are not very large. Furthermore, the locality is not favorable to much swarming. Taking the average of several years, only 1 colony out of 10 swarms. So I put queen-traps on all, and requeen only those which actually swarm. It is far less work than treating all. And those that do not swarm do much better than if they had been disturbed. ADRIAN GETAZ.
>
> Knox Co., Tenn.

Dr. Miller offers the following in reply to Mr. Getaz:

> It has long been known that the swarming fever could be overcome by having a colony queenless for a certain time, and upon this was based the treatment of swarms given by Mr. Doolittle some years ago, which treatment I used for a time with much satisfaction. When a colony swarmed, the queen was caught, caged, and the cage left in the hive. Five days later all cells were destroyed, and after another five days they were again destroyed, and the queen freed. The plan is an excellent one where there is any one to watch for swarms, and where increase is not desired.
>
> But I think Mr. Getaz is the first one to give so satisfactory a theory as to the why, namely, that the colony is so long a time without unsealed brood that the nurse-bees have pretty much all become fielders. To this he would probably add the theory that the swarming-fever has been induced by the throwing out of balance of the different forces, the nurse-bees having become so numerous in proportion to the amount of brood to be fed that there is a glut in the market of food-material prepared by the nurses.
>
> Mr. Getaz says, "The condition of success is not to release the queens until the colony has been at least 4 days without unsealed brood." In following out the Doolittle plan mentioned, there is a seeming lack of that condition, for the queen is released 10 days after the issuing of the prime swarm. If the queen continued to lay up to the time the swarm issued, that would leave the colony only a day or two, instead of 4 days, without unsealed brood. But it must be remembered that during the last few days before swarming the queen has been tapering off in the matter of laying, so that to all intents and purposes the bees are 4 days without unsealed brood.
>
> After a colony is "treated" by having been kept without unsealed brood a sufficiently long time, Mr. Getaz says it does not make a particle of difference whether its own or another queen is given. He quotes me, in company with such an eminent authority as the lamented Gravenhorst, as holding a different view, and expresses the wish that I would try again, keeping in view the proper conditions. No need to make any further trial, Mr. Getaz, or, rather, I have tried it many times. You are entirely right.
>
> Gravenhorst was right, too, as far as he went, but he and I were ignorant of the whole truth. He said that if you give to a colony a young queen reared elsewhere, that would not prevent the swarming of the colony, but if a young queen were reared in the colony itself, that colony would not swarm till the following year. He said he didn't know why there was such difference. In the light of the explanation given by Mr. Getaz, the reason is very clear; when the young queen is reared in the colony itself, there is the proper "treatment," the colony being left a certain time without any unsealed brood, whereas when there has been no such treatment I have had a colony swarm when a queen not a month old was given—swarmed, too, in less than a week after the young queen was given.
>
> Long since I have learned that "treating" a colony by keeping it without unsealed brood is an important requisite, and have acted upon it, but without any satisfactory explanation as to the why, and hereby thank Mr. Getaz for such explanation.
>
> McHenry Co., Ill. C. C. MILLER.

◆

Mating and Swarming of Virgins

Commenting on an editorial on this subject, Wm. Muth-Rasmussen, of Inyo Co., Calif., writes thus:

> In an editorial, page 581, under the head of "Mating and Swarming of Virgins," a very important factor is omitted on which the whole question hinges, viz., that the bees behave in the manner stated, *only when there is no young brood in the hive from which another queen could be reared, if the present virgin should be lost on her mating trip.* When there is suitable brood for this purpose, I have never known a swarm to issue with a virgin queen when she goes out to mate, and for this very reason I am always careful, when I know in advance that a virgin will come out, to see that there are eggs and young larvæ in the hive, or to supply them if necessary.
>
> I do not now remember if, in my letter to Mr. Doolittle, I said that bees in such cases "invariably" acted so. If I did, this was perhaps too sweeping a statement. I should rather have used the word "frequently." But I had so many cases of this kind during the swarming-time of the present year, that I could not help thinking and questioning about the matter.
>
> I have since written to Mr. Doolittle, and given him a more detailed statement of facts. Though I feel sure that I have repeatedly seen the same thing mentioned in print during my 35 years of bee-keeping, I could at the time of writing lay my hand on only two quotations, one from Dr. Miller's book, page 165, 1st line from above; and one from "A B C of Bee Culture," 1905 edition, page 287, 2d column, 2d line from above. Dr. Miller says:

"If, by chance, a young queen is in the upper hive, I do not like to put her down until she commences laying and her wing is clipped, for fear of her taking out a swarm. *It seems a foolish operation for them to swarm when there is nothing in the hive from which a queen can be reared, but I have had it happen.*" (Italics mine.)

Mr. Root says: "......it [a frame of unsealed larvæ] serves as a sort of nucleus to hold the bees together, and to keep them from going out with the queen on her wedding trip, which they are much disposed to do, if in a small nucleus containing no brood."

It seems to me that these eminent authorities corroborate my statement, although my experience was with full colonies with clipped queens, that had already swarmed and been returned to the old hive.

Perhaps Mr. Doolittle will use my last letter for another "Conversation," and I hope that he may be able to shed more light on the subject. WM. MUTH-RASMUSSEN.

No mention was made on page 581 as to any difference made by the presence of young brood, for the simple reason that in the article of Mr. Doolittle, in Gleanings, there was no hint that the presence of unsealed brood would make any difference. Thanks are due Mr. Muth-Rasmussen for bringing out that point. It emphasizes the value of unsealed brood in a colony or nucleus having an unfertilized queen, as urged by Mr. Root. Whether Mr. Doolittle or Mr. Muth-Rasmussen be right, it seems a safe precaution to see that there is unsealed brood in any hive containing a virgin queen.

But there is no need, really, to assume that either one is wrong. Mr. Doolittle merely says he has not had the same experience as Mr. Muth-Rasmussen. That does not say that Mr. Muth-Rasmussen and others may not have had such experience; the interesting point being to find out what is the general experience; or, possibly, to find out what different conditions produce different results in New York, from those quoted by Mr. Muth-Rasmussen in California, Illinois and Ohio.

◆

Honey Advertising in the Bee-Papers

When we were in the honey-business we bought a great deal of honey from the large producers, and then sold it to smaller bee-keepers who did not have enough to supply their customers. In view of our experience, we do not see why it wouldn't pay those who have large honey crops to offer it to other bee-keepers, as mentioned. Our advertising rates are 10 cents a line, 7 lines to the half inch of space, which is the smallest advertising space we quote a price on. Perhaps a few insertions would sell a crop of honey, provided the price asked for the honey is not too high.

"The Honey-Money Stories."—We have mentioned several times in these columns our new booklet, called "The Honey-Money Stories." We have received the following expressions of opinion concerning it:

DEAR MR. YORK:—I was greatly but agreeably surprised, a couple of days ago, to receive a little booklet published by you, named "The Honey-Money Stories." It is nicely gotten up, the illustrations are fine, and the printing is good. Some one must have done some good editing in the make-up. But I was most surprised to find the little lullaby I sent you a few months ago set to music by yourself. My daughter has tried it on the piano, and says it is very pretty. I am greatly pleased at the setting you have given it.

Yours truly,
EUGENE SECOR.

We are indebted to Gleanings in Bee Culture for Sept. 1 for this paragraph:

"The Honey-Money Stories" is the title of a new 64-page pamphlet published by George W. York & Co., Chicago. It is well printed and beautifully illustrated. The subject-matter is prepared in popular style, calculated to interest and attract the attention of the ordinary consumer of honey. The stories are interesting, and from every point of view are calculated to tickle the palate of the person who has never eaten honey, and to stimulate the desire for more on the part of those who are lovers of the sweet. The price of the pamphlet is 25 cents. Bee-keepers can probably procure them of the publishers. Mr. York is to be congratulated on getting out so interesting and attractive a book.

To show how it works to distribute copies of "The Honey-Money Stories," we give the following:

Since reading "The Honey-Money Stories" I am a more firm believer than ever in the food value of good honey, and shall eat more of it. R. J. H.

Just a little brousing in "The Honey-Money Stories" convinces me that I need four more copies for friends. A. W. S.

"The Honey-Money Stories" booklet contains 64 pages and cover, with over 30 half-tone illustrations. It is printed on enameled paper, and is a gem in appearance. Single copy, 25 cents postpaid; 5 copies for $1.00. Or a copy with the American Bee Journal one year—both for $1.10. Send orders to this office.

◆

Uniting Swarms.—A. W. Boss, of Kansas, wishes us to ask for a general discussion in these columns of the practicability and the best method of uniting swarms. Might also have the same thing discussed concerning colonies.

◆

"Getting Even."—Æsop's Bear was angry because a Bee stung him, so he madly overturned the hive. Foolish bear, instead of "getting even" he got stung.

The man who grows furious at every little real or fancied insult and tries to "get even," soon finds himself caught in the brambles of annoyance. Remember that "getting even" is a life job that is never completed. If you spend your time "getting even" with people, you will be in the position of the Bear and the Bees—you will have no time for business.

"Getting even" means putting yourself on the same plane as the man whom you despise. Is that worth while? Is it consistent? Don't get the "getting even" habit, unless you wish to see the unpleasant side of people, and spend your life in one long wrangle. Don't think you must defend your dignity at all times. A dignity that needs defense is no dignity at all.

Much that we take offense at arises from misunderstanding. The rest is the escape of the spleen of ignoble souls, and should be given the same attention the lion gives to the braying of the ass.—The Star Monthly.

Miscellaneous News Items

Mr. Huber H. Root, youngest son of Mr. A. I. Root, was married Sept. 6, to Miss Mabel Knisely, of Butler, Ind. Our heartiest congratulations to "Huber," who evidently has done so "Knisely" in a matrimonial way, and also to "Mabel," who now is so well "Root-ed." They will be "At Home" in Medina, Ohio, after Oct. 15.

◆

Mr. Thos. Wm. Cowan, editor of the British Bee Journal, was expected to leave for Portland and the North, on Sept. 9. He and Mrs. Cowan have been spending the summer in their California home. They will proceed on their journey homeward, across the Atlantic, after visiting the Portland Exposition and stopping along the way across the Dominion of Canada. May they have a pleasant voyage and a safe arrival home.

◆

Clarence G. Dittmer, second son of Mr. Gus Dittmer, of comb foundation fame, gave us a pleasant call last week. He was on his way back to Baker University, located at Baldwin, Kans., where he spent the last college year. "Clarence" is a veritable "chip of the old block," and knows what he is going to school for. We bespeak for him an honorable career. He reports his father as doing a satisfactory business this year in comb foundation, which must be very gratifying, as the Dittmers have worked hard to build up a good business.

◆

The Bee-Keeper's Lullaby, on the first page, is the latest in the apiarian music line. As will be noticed, Mr. Eugene Secor is the author of the words, which were published in these columns Nov. 17, 1904. At that time he suggested that possibly we might be able to set it to music, and the result is thus given. We make not the slightest claims to musical ability, but if "The Bee-Keeper's Lullaby" should be used by just one weary mother in singing her baby to sleep, we will feel well repaid. Should an extra copy of the song be desired, we will mail it on receipt of 10 cents, 2 copies for 15 cents, 3 copies for 20 cents. The extra copies would be printed on a single sheet of stronger paper than that on which the American Bee Journal is printed.

◆

The West Michigan State Fair, as previously announced in these columns, is to be held at Grand Rapids, Sept. 18 to 22. Mr. A. G. Woodman, superintendent of the apiarian department, is sending out a very neat 4-page circular advertising the Fair and also several things of interest to bee-keepers. On the first page is the excellent picture of last year's exhibit, as shown on the first page of the American Bee Journal for Aug. 17. The second page has the apiarian premium list in full, and the third page, among other things, gives these further attractions:

The apiarian department of the Fair has arranged to have one of the best informed bee-keepers and largest honey-producers in Michigan to talk on bee-topics, answer questions, etc., from 10 a.m. to 12 m. each of the following days:

Tuesday, Sept. 19—W. Z. Hutchinson, editor of the Bee-Keepers' Review.

Wednesday, Sept. 20—S. D. Chapman, whose honey crop for 1905 is 17,000 pounds.

Thursday, Sept. 21—E. D. Townsend—1905 crop 25,000 pounds.

Friday, Sept. 22—Geo. H. Kirkpatrick—1905 crop 14,000 pounds.

This is an excellent idea, and Supt. Woodman is to be congratulated upon his enterprising methods and management.

Contributed Special Articles

Injury to Queens in the Mail

BY C. P. DADANT

MY attention has been called to an editorial on page 565. It has always been my opinion that valuable queens were often hurt in the mails, but the mail service is so prompt, and the cost of transportation by this method is so economical, that it is natural for both queen-breeders and bee-keepers to adopt this method of conveyance. But it was a long time after the mailing of queens was adopted that I could persuade myself to use this method.

The transporting of bees was not formerly as successful as it is now, and for years it was thought impossible to ship bees from Europe with safety. The queens sent from Italy were always sent by express, and, in most instances at first, were literally drowned in honey or water, by the mistaken solicitude of the shippers.

In an article lately published in the American Bee Journal, I was made to say that we imported as many as 40 queens a year from Italy. It should have read 400 instead of 40. This was after the importation became successful through repeated trials. These queens were all sent in what would now be called "baby nuclei"—little boxes about 4x6 inches, containing two combs, one with very ripe, white honey or sugar syrup, the other absolutely dry, so that the bees could have room on dry combs. Plenty of ventilation, old bees fresh from the fields or just departing for the fields, and no water. These were the successful conditions needed.

We often found some of the little combs partly filled with eggs, probably layed during the first part of the journey, but which had failed to hatch because of the lack of sufficient warmth. These little "baby nuclei" were bunched in lots of 20 to 24, strengthened with a sheet of tin on the outside, a cushion on the underside of the package, and a handle at the top. These packages were always sent by express at great cost, but the bees came in fine condition, and no better queens could be had than those thus received. Yet they were the Italian bees in their natural conditions, without any select breeding, for the new ideas were just beginning to make their way over there. A great deal of progress has been achieved since.

The damage to the queens sent through the mails is due mainly, in my opinion, to the rough handling of the mail-bags in many places. To be sure, the queen that is heavy with eggs suffers the most from this rough handling, while the young queen that has just begun to lay is hardier. We all know how heavy and matronly a mature queen is, how easily she drops from the combs, owing to her enlarged abdomen, and it is very easy to imagine that her condition renders her unfit for rough handling. Perhaps if she were made to fast for a few days there would be more safety in sending her out.

I am not a friend of the express companies, who seem to want to eat up the value of what they transport before giving it up, but until a better method of transporting is devised, I would much prefer to send a valuable queen in a "baby nucleus" by express than to risk her through the mails. It seems to be now out of the question to ship anything even as small as a 2-frame nucleus through the breadth of our land. Bees are too cheap in every State to be sent at the expensive rates that are prevailing, and a queen is just as safely transported with a retinue of 50 worker-bees, in the summer, and probably more safely than if she were left in a populous colony, no matter how carefully the combs might be adjusted for shipment.

Hancock Co., Ill.

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Uniting Weak Colonies with Strong Ones

BY W. T. CARY

I SEE on page 570, Mr. Hasty, in commenting on Edwin Bevins' hard luck in trying to unite a weak colony with a strong one by the use of an excluder, to save both queens, thinks we need more reports. Well, here is another report.

It iwell remembered I reported a case I had last spring in answer to Dr. Miller's request, and it was published on page 523. The case I now have to report is this:

How I was about to requeen a colony but didn't. But first I would like to tell how I did requeen 2 colonies in an old-style way. I killed the old queens and set nuclei on top with young queens in shallow extracting supers, one of these nuclei being quite strong and almost filling the super; the other was quite weak, covering about three frames. Result: Two big battles, a lot of dead bees in front of those two hives, queens quit laying, and a lot of cells built. The hardest fighting was done where I placed the weaker nucleus. I found the queens all right, however, with their cliques, and I destroyed the cells where the hard fighting had been done, and so settled the difficulty in that hive, but thinking the other queen was mistress of the situation, I closed the hive without observing the cells, until the young queens began hatching, and precipitated a swarm.

Now for the case in question. I formed a nucleus consisting of 2 shallow extracting combs with a little brood and honey, a handful of bees, and a cell placed in one side of a super with a division-board. The hive to be requeened was provided with a plain flat cover on the edges of which I layed ½-inch strips to form a temporary bottom-board with a small entrance at one rear corner, and placed the nucleus up there.

As soon as the young queen had hatched and was laying in good earnest, I filled that super with empty combs, and then removed the temporary bottom-board and replaced it with two wood-zinc honey-boards, retaining the ½-inch strips to maintain the rear entrance for the young queen's escort.

Now for results: There was very little quarreling. Perhaps a half dozen dead bees were thrown out to the rear, but in less than two days that super was half full of bees, and and that young queen was perfectly at home among them, and laying "to beat the band." My theory is that the old queen below entertained her own field-workers and other principal forces, and kept them contented and practically isolated from the seat of conspiracy, while the young bees that wandered up there were easily persuaded to follow the band-wagon.

Now they remained in that position for a week, when I looked in the hive below and found the old queen doing so well that my heart failed me, and I did not kill her, but in the meantime I had a swarm issue from another hive and strike for the woods forthwith, while I was fixing to go to Sunday-school. So the next day I destroyed the cells in that other old brood-chamber (hybrid rascals), and placed that nucleus on top of it, and all went merrily on.

Now, there is one point I would emphasize, and that is, the use of two honey-boards. I never tried it with one, but it occurred to me that two queens, both being as free as those two were, would likely raise a row if they got their horns together. Then, also, that rear entrance enabled the young queen's escort to avoid passing through the old brood-chamber below while negotiations were being carried on with the young bees that were drawn up.

Carroll Co., Mo.

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Why Bee-Supplies are High—Home-Made Hives

BY J. E. JOHNSON

THERE has been considerable written in bee-papers, both *pro* and *con*, in regard to high prices for bee-supplies. I have bought 1½-story hives in the flat for 73 cents each, and they were good ones—in fact, the same firm still sells them, but charges $1.55 each for them in lots of 10.

However, this hive question has two sides. If hives could be bought at 73 cents each at this day, every Tom, Dick and Harry would be in the bee-business. The market already suffers from the fact that there are so many who have only a few colonies of bees and don't take proper care of them, and bring their honey—what they have—to the stores and exchange it for groceries at whatever price the merchant sees fit to pay. And they don't care how much it injures the market, as they do not depend upon bee-keeping for a living, but just consider that the honey they get costs them almost nothing, and they are just that much ahead. They don't pretend to scrape the sections or grade their honey, and I find that some of their sections weigh 18 ounces, others as low as 10 ounces, and some even having contained brood. Now, if the high prices of supplies would drive every bee-keper of this kind out of business, it would be a blessing to any community.

While I think prices of supplies are too high, I also find customers occasionally who think 15 cents for honey is also too high. I see by Gleanings that for several years their factory has had to run night and day quite often in order to make the hives as fast as they are called for, and they are often behind with orders. I suppose other factories are also kept pretty busy. Now, if my customers would just be as anxious after my honey as the bee-keepers are after the factory-made hives, so that I would have to work both night and day to supply the demand for honey, I am a little afraid that I should have to raise the price of honey a little—in fact, I would probably charge 18 to 20 cents for the very finest. Fellow bee-keeper, would you condemn me for this? Would it be a very great wrong? Would there be anything wrong in my raising the price of my honey if the demand was so great? Say, fellow bee-keeper, we are in luck that prices are no higher than they are. If the ordinary Wall Street capitalist controlled the hive industry we would probably have to pay $1.00 for the inside furniture of an empty super.

Several years ago I tried to make a few hives in swarming-time. I had only store-boxes to make them of, and my tools consisted of a hammer, ax, and a cross-cut saw that had not been filed or set for about 10 years, and a square that the horses had stepped on. It is needless to say that my hive-making was not a success. The supers acted as if they were drunk—when one corner came down the other went up, and they persisted in staying in a whin-wha shape. I had to mark the corners to tell how to get the supers back as they were, and if I put the wrong super on a hive I had to introduce it before the body would accept it, and I am sorry to say I sometimes said, "Darn it!"

Well, I quit hive-making, and stayed quit for about 15 years. But I have begun again, and I find it all depends upon knowing how. I now make a good hive that fits, and gives good satisfaction, for about 50 cents for an 8-frame, 1½-story hive, complete except fences. I'll try to tell how I do it.

First, I procured a good cross-cut, fine-tooth saw, a rip-saw, a square, and hammer and plane. I buy a fairly good grade of lumber for $30 per 1000 feet. I get the boards 10 inches wide, planed on both sides. This lumber contains a few knots, but only small ones. I cut the hive-lengths first. All clear length is used for cover and body, the poorest going for bottoms. One 10-inch board and one ripped in two makes a cover. One 10-inch and one 4-inch makes a bottom. For the body I have to rip off about ½ inch, and this makes a good top-bar for shallow frames.

Now if you will take a factory hive and use it for a pattern, and cut everything not pretty near square, but exactly square, the hive will nail up square, and be as good as any factory-made hive. I use 2-inch strips for cleats for cover and bottom, by ripping a 1x4 in two, so the only kind of lumber I buy is 1x10 inch boards, 12 feet long, and 1x4 inch 12 feet long. I also make shallow extracting supers from 1x6 inch boards, planed on both sides. I make frames in a mitre-box, which is a square trough with a *square-cut across* for the saw to run in. The bottom of this box is marked in lengths for top-bars, bottom-bars and end-bars. I get store-boxes of soft, fine lumber of proper thickness, and the rip-saw will rip it into strips, like cutting cheese. I run the plane over the edges and then lay in the mitre-box and cut. This insures a square cut, and the frames will be square, and as the marks are on the mitre-box, that saves marking in length. I can make 300 in a day if I have proper material.

There are lots of store-boxes to be had for almost nothing, but don't use anything but good pine or it will warp.

Now, it is not a great job to make 100 hives, and almost any bee-keeper can find time during the winter and on rainy days to make all his hives, if he doesn't want over 100, and they won't cost over 50 cents each, complete, for material. Figure it up yourself: Cover, 2½ feet; body and super 7 1-9 feet; bottom-boards and cleats, 3 feet—total, 12 11-18—say 13 feet. At 3 cents a foot—39 cents. Material for frames, 5 cents; nails, 6 cents—total, 50 cents.

Now, let all who want to do so make their own hives, and all who prefer to buy let them buy and pay their money. As for myself, I will make my own hives and some for my neighbors.

I also have a home-made solar wax-extractor made from a store-box of proper size. A window-pane 16x32 inches, and a sheet of galvanized iron for a bottom, and it works fine. By its use I get from 10 to 20 pounds of wax each year. I have a Rietsche-Getaz press which makes fairly good brood-foundation, and costs only $1.50 and freight.

So, while bee-supplies are high we don't really have to buy them unless we want to. Some supply dealers deny the existence of a "trust," but they have admitted to me that there is an understanding between them not to compete in prices with each other, and when there is a raise of prices those in the agreement all raise at once, just like the curtain on a stage. Of course, all there is to any trust is an understanding between the members of the trust to raise prices. All trusts are an evil, because the most powerful manufacturers compel other manufacturers to sell higher than they would if no trust were in existence, and thus poor and needy people are compelled to pay unjustly more than they ought to pay for goods. The President is after the trusts with a sharp stick, and possibly he will investigate the bee-supply trust.

The argument used by the manufacturer, that expensive machinery is the cause of high prices, is nonsensical. We all know that the reason modern expensive machinery is used is to cheapen the cost of the production by labor-saving machinery, not to make it cost more. If it were not so why use it?

However, we should always remember that the great demand for bee-supplies is the cause of the high prices, as it makes a trust possible, and we are the ones who have been demanding the goods, so, in a measure, the manufacturer is justifiable in raising prices. The rise of prices of raw material is responsible only for a part of the raise in prices of hives. The manufacturer ought to buy lumber much cheaper than the bee-keeper, by buying in large quantities. However, if our honey customers were as eager to buy our honey as the bee-keepers are to buy factory-made hives, and if some bee-keeper in our locality would persist in selling honey real cheap, would we not make it a business of ours to ask that bee-keeper to charge more for his honey? In fact, we would probably all agree to raise the price of honey. Then what would we be? Some people would call it a "trust," others would say there was merely an understanding, and if the demand still continued great, and our customers would take our honey at a good price as fast as we could produce it, we would not, I think, put honey down in price of our own accord, nor could our customers expect it. Neither can we expect lower prices for hives as long as we demand so many of them at present prices.

Knox Co., Ill.

Convention Proceedings

Report of the Chicago-Northwestern Bee-Keepers' Convention, held at Chicago, Ill., Nov. 30 and Dec. 1, 1904

(Continued from page 633.)

EVENING SESSION.

At 7:30 o'clock p. m. Pres. York called the convention to order and stated that before proceeding with the business they would be favored with some music and a couple of readings.

Master Ferdinand Moore and Miss Esther Wheeler, favored the convention with instrumental solos; Mrs. Dittmer pleased them with a reading entitled, "A Lullaby," while Dr. Miller convulsed the audience by a reading showing how a certain German was cured of rheumatism by the bee-stings.

ADVERTISING HONEY AS A HEALTH FOOD.

"What can this Association do in the line of advertising that will show the value of honey as a health food in the newspaper press?"

Dr. Miller—I think perhaps the Association will do about as much as it can be expected to do in that direction by the publication of this report, in getting in the things that were said here to-day and encouraging the publication of items in the local press.

BREAKING DOWN PRICES OF HONEY.

"What can this Association do along the lines of preventing bee-keepers themselves from breaking down the prices of honey early in the marketing season?"

Mr. Wilcox—That is the most important question we have to consider; at least it has been with me all my life. We have never found a solution, and I don't believe we ever will. I believe that the best advice we ever had on that subject was that given by our late friend, Thomas G. Newman, when he advised us to work the home market, to see it was always supplied with all the honey it could take. The aim should be to increase the consumption. It is quite certain that there is not as much honey consumed as there can be, and should be, and would be if it were properly presented to all people. It involves an extensive system of advertising, and that has been told over and over again by Mr. Abbott and others, and yourself, Mr. President, and I believe that it is in the right direction. I can't think of anything better to get the world to know it is good, and use it. I propose to try a little scheme of my own of honey and buckwheat cakes, simply because they are two commodities in which I feel interested. I believe the two will work well together, and the consumption of one will help the consumption of the other, for anything that will tend to increase the consumption of one will help the other.

Pres. York—I think the price of honey is lowered by some bee-keepers not knowing what honey is worth starting out with the price too low.

Mr. Wilcox—The remedy for that, so far as my own locality is concerned, has been by some one who does know the value of honey, or can learn it, in the season buying up all the cheaper lots and putting them upon the market at the proper price.

Mr. Whitney—It seems to me that the way to furnish a good market for honey is to produce the very best article you can, and make people believe it. I have known honey to be sold at 15, 16, 18 and 20 cents a section right in a community where much honey was selling for 10 cents, simply because they knew that the honey they were paying the higher price for was all right. I think every bee-keeper ought to do the very best he can, not be slipshod, not have dirty-looking sections, not have one full of holes all around, or perhaps not filled at the bottom of the section at all. Produce the best article you can, and make people believe it is all right, and set your own price.

Dr. Miller—I suppose that nearly all here have been taught to believe by the newspapers that they need a biscuit. Pick up any newspaper and "Uneeda biscuit" will stare you in the face. Thousands and thousands of dollars are evidently spent in advertising that one style of biscuit. Those men are not spending money for fun; they are not wasting money, either; they are level-headed men, with a standard article that needs money spent in advertising it. Is there any question that a proper amount of advertising of honey would bring in returns? Is Mr. France here? I was just wondering whether he would agree with my statement or not. Yes, there he is. Mr. France, I want to see if you will agree with me. If the money that has been spent by the National Association helping to settle quarrels were spent in advertising honey in the public press, somewhat in the same way that "Uneeda Biscuit" is being advertised, I believe it would do more good, just a little more, at least, towards raising the standard of honey all over the country. Now if you don't believe that, Mr. France, say so.

Mr. France—I endorse it.

Dr. Miller—Good for you. I believe that is a point in the right direction. You ask what can this Association do? If this Association could get enough money into its treasury to help in that same direction that would be a good thing. For at least this Association is helping to make the National what it ought to be, and I am speaking for one only when I say that I believe there is a great work for the National before it to advertise honey, to put a lot of money in. It will take a lot of money. But if the thousands upon thousands of bee-keepers in the country could be got into it there would be money enough to do some good. I know very well some of you will say it will take so much money you need not try it at all. If you can suggest something better I will take that back.

Mr. Moore—There is a thought that occurs to me, different from anything that has been expressed by anybody else. I was one of those who went to the Illinois Legislature and helped them to get a law two years ago for bee-keepers—and an appropriation. In the midst of other things this impressed itself upon my mind: The faith and confidence that the Legislature and the public at large have in associations. There is so much crookedness in the world at large that people are skeptical about anything they don't know anything about. For instance, take this question of manufactured comb honey: The public at large do not know any more about comb honey or foundation than a week-old baby does about arithmetic or the dictionary, until they are taught by the specialist, and they decide the worst possible thing out of their absolute ignorance on the subject. But they look upon our associations, the bee-associations, the dairymen's associations, the fruit men's associations, and anything coming from those associations, and put forth in a formal manner, as the act of those associations, and give full credence. Witness the Dairymen's Association got through the law establishing a pure food commission. I think I am correct in saying there would be no such law on the statute book today unless the dairymen had talked it and worked for it. Another thing, three or four associations were given appropriations by the Legislature two years ago. They give the Illinois State Bee-Keeper's Association $2,000. They did that because the association asked for it, and they took at one hundred percent all the statements made by the association. Now, let us, along with the National, advertise in such papers as seems best, "Buy your honey of members of the National Bee Keepers' Association," or other associations, according to your judgment, and continue that year after year, not at large perhaps, but somewhere every month in the year for five years. After a while everybody who reads the English language will know that there is honey sold that is guaranteed by the name of the National Bee Keepers' Association, and people will come to inquire for honey under the brand and guarantee of the bee-keepers' association. That has been done for ten years now in Vermont. The Vermont Maple Sugar Makers' Association issues a very fine report every year, and I have had the pleasure of reading two or three of them, and one of their methods was to go to the Legislature and get as stringent a law as they could. Then they have adopted a brand which is issued to all members of the Vermont Maple Sugar Makers' Association. It is a general brand which is copyrighted or trademarked, which ever it is, and there is a blank for each member to put in his own individual name and address, and there is a penalty against any one using this except authorized parties. It seems to me that is perfectly feasible, when you take into consideration the public minds, and advertising would be a way to spend some of our money.

Mr. Becker—Those bee-keepers that are taking the bee-papers and are paying annual fees here, claim to get a fair price for their honey. Now, suppose we advertise, you have a certain element to contend with that almost give their honey away. You go through the country, and even in my section of country, I can cite you 25 or 35 that have from 5 to 50 colonies of bees, and one of our own members of the Illinois' Bee-Keepers' Association a few years ago sold her honey at 10 cents a pound, as fine white clover honey as ever was put on the market. The storekeepers themselves said, "We would just as soon give her 12½ cents as 10 cents." The past summer I knew of one case where a man sold 1,000 pounds of honey at 8 cents a pound—fine white clover honey. I was after the honey myself, but happened to be just one day too late, and he wouldn't sell any quantity, but he wanted to sell the entire lot at 8 cents a pound. Last year I bought 1,000 pounds of honey at 9 cents a pound in the same locality. I could have bought 5,000 pounds more at 8 cents. What are you going to do with those that know the price, and hold the better honey at simply a fair price? The past summer, when I wanted to sell my honey, I had to run up against honey sold at 12½ cents a pound and I bought 12 cases myself and gave 13½ for it to the storekeeper. The storekeepers are just about as smart as we are. You come into the city with a thousand pounds of honey on your wagon and you want to sell it. You bring it to a store and they say, "Well, we will give you so much money for it." If you are a stranger in that city you probably can drive all over it and you can't get any more money for it, and you might as well have taken the first bid in order to get rid of your honey. These grocery keepers have an organization that is called the Retail Grocery Association. When a fellow comes in, the first man he strikes makes an offer. If you could stay around you would probably see him go to his telephone and watch the honey man, to see which direction he is going, and then telephone to his next friend, "There is a man in town with so much honey; I made an offer of so much money;" that is when there is an abundance of honey. If the article is scarce then they buy it. But you will always have to contend with the bee-keepers who do not know the prices and do not care. They bring their honey into market early, and you men that have honey and are trying to make a living have to hold on until that honey is out of the way, and is consumed, before you get better prices. You have to contend with these parties that do not take a bee-paper, and don't know the price of honey nor how much honey there is in the country. They sell it for whatever they can get. They go to the store and take it out in other commodities, while you want to get the cash for it; and they always sell it for less money than we can.

The balance of the evening session was in the hands of Ernest R. Root, who delivered a very interesting lecture, copiously illustrated with stereopticon views, also with moving pictures.

(Continued next week)

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

SHOTGUN METHOD OF GETTING DOWN SWARMS.

Actual experiences with the shotgun method of getting down high clusters are very welcome. Frank E. Kellogg's seems to open up new possibilities, in that the limb proved a little too big to shoot off. The impact of two charges of shot at once gave a jar sufficiently violent to drop them pretty clear, not taking off the limb. The sequel was a rather improbable one that I guess must not be expected every time. They didn't do the most probable thing—remain crawling on the ground—neither the next most probable, fly up to the same place again, but took a third and unusually kindly course of alighting in an easier place. I kind o' guess that a swarm that happened to be feeling almost ready to start again would be less frantically persistent in going right back to the identical spot than one that has recently clustered frequently is. But that would be a very risky idea to travel on. Page 524.

HONEY-TANK CARS FOR BEE-KEEPERS.

There are a few customers that use extracted honey in great quantities. *They* don't like tin cans. Too petty and fussy. I wonder if the honey-trade will ever grow to having its own tank cars, and so avoid both the pettiness of tins and the everlasting leakage of barrels. The honey-tank car I view as differing from the oil-tank car only in having a bigger man-hole, by means of which a man could go in, and, standing on a big plank, shovel candied honey into a half-barrel bucket. Of course, the honey *should be* used out while still liquid; but Shouldn't Bees are so plenty in this world that I guess they should be provided against in this case. Page 533.

ONE SWARM OR NO SWARM PER COLONY?

As to whether one swarm or no swarm is to be preferred, 3 of the 29 experts do not meet the question very squarely. Of the remaining 26 only 4 decidedly favor the one swarm. About 19—a very heavy majority—desire a state of things in which there is no swarming. About 11 point out that no swarming is best for a short, early flow with no late surplus, while the colony and its swarm will exceed where there is a good, late harvest. Page 535.

HIVES NUMBERED AND IN GROUPS.

Yes, sir, in Dr. Miller's apiary No. 25 stands right by the side of No. 26, instead of at the opposite corner of the yard as it's "the way" to have them. We can see this in the picture on page 534. We can also see that he places his hives in the up-to-date 4-hive group. I admit that my groups of 9 are not as good; but changing is troublesome, and also my style is better in some things; so I keep on in a way that is not up to date. One minor thing in which my style excels is that it is entirely needless to have any visible figures. Each stand has its number, and I can instantly tell it without any numbers posted up to view. This faculty is not any sleight of mine, but any one could quickly learn to do the same thing.

CYPRIANS AS QUEEN-REARERS.

I still hold fast my view that building an extravagant number of queen-cells is one of the badges of inferiority, and that a disposition to build only three or four represents the highest development. The Cyprians are halfway back to bumble-beeism, in which state every female is more or less a queen. One of my biggest I-don't-knows is I don't know whether it can do any harm to have Cyprians rear queens for more highly developed races. Suspicious. Let the attenuation of the food be carried far enough and the queen wouldn't be a queen at all, but just a worker. I suspect that the same thing carried not quite so far would produce a short-lived queen. Dr. Miller must carefully watch and see whether those Cyp-reared queens live as long as they ought to—and then tell us, "honest Injun." Page 534.

THE LEAGUE'S SHIPPING-CASE CIRCULAR.

For saying just what ought to be said, and leaving out an immense amount of rubbish that does not need to be said, the Honey Circular on page 536 deserves very high praise indeed. But I wish to plead hard for one little change in future editions. In the fourth paragraph read "enforced" in place of "in force." The latter only means on the books and capable of being enforced. A State which has a pure food law and takes no particular pains to enforce it is no safe place to buy extracted honey on the general market. Don't let The Honey-Producers' League begin by retailing fibs to the profit of the honey-man and the harm of the public. Creating confidence in extracted honey where it is not worthy of confidence is just doing the adulterator's work for them.

Quite likely some will neglect to obey the "N. B.," because they can't imagine *why*. Would it be worth the while to put in between the second sentence and the third, "Honey has a troublesome tendency to absorb moisture?" To be sure. one might guess the why if he would meditate a little on the closing sentence as it is.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Bee-Keeping and Most Desirable Apiarian Outfit

Dear Miss Wilson:—I have not now even a colony of bees, but hope by next spring to have a nice little start in the business. I kept bees for three years in a little village railway town, starting with 2 colonies and increasing to 11 at the end of the third year, and although it was new work for me, and a side-issue, as I was in a little store, and one season was very wet and one very dry, still I think I did very nicely in a financial way, and became very much interested in the work, but I sold out my little store and so left the town, and a little later I also sold my apiary. I had a very nice and handy outfit.

I wish to begin right when I start in the spring, and want to ask you some questions to help me out. I thought you might have a little more time and patience with a woman, as you are a woman yourself. So I write you, instead of Dr. Miller, who is no doubt too busy to sit down and write answers to my many questions. Some of them may cause you and the good Doctor to smile, but, then, you must remember that I am still somewhat of a "tenderfoot," and I am anxious to learn more of the delightful work.

My mother has at our home 3 colonies of bees to which this season I have given some attention, and it has renewed my interest in the work, no doubt. Mother had a lot of old comb and old wax, and she could not afford a solar wax-extractor, so, as I had seen one, from memory I took a box and some glass, tin, black paint, etc., and made one which worked nicely, and extracted the wax as nice and clean as we could wish. Mother had 2 colonies, and one swarmed, and that gave her a third, which I hived for her; however, the hives, frames, etc., are not in good shape, but I have done the best I could with them.

Now for the questions:

1. Is there any one particular hive that you and Dr. Miller regard as the *best*, or superior to all others? If so, what is the name of it? Also, what kind do you use? I suppose, of course, that you are using what you regard as *the best*, unless there has been put upon the market a better one since you have bought a supply.

2. Kindly give me the dimensions and number of frames in the brood-chamber, in the extracting-super, and also the size of same.

3. I think that I will do some extracting and run some for comb honey, as I did before. Which would you advise me to do, extract, or run for comb honey, or both?

4. Do you run mostly for comb honey?
5. What size of sections do you use?
6. May I ask how many colonies of bees you keep?
7. How do you increase—by natural swarming?
8. Do you clip your queens? Do you think it injures them?
9. Do you have only the pure Italian strain?
10. What kind of wax-extractor do you use? also honey-extractor?
11. In what direction do you face your hives, and how near side by side and in rows do you place them?
12. Do you have fruit-trees, grapes, sunflowers, or anything of the kind in your bee-yard? If not, what shade do you have?
13. Do you use boards to protect your bees from the sun or storm on the top and sides of the hives?
14. Do you have a tight board fence on the northwest side of the yard to protect the bees from the cold winds and storms?
15. Do you have alighting-boards?
16. Do you keep all grass and weeds down around the hives?
17. How high is the body of your hives from the ground? **Flora E. Phillips.**

Winnebago Co., Ill.

1. We use the 8-frame dovetailed hive, and know of nothing better, although for some the 10-frame hive may be better, as there is less danger of a colony running short of stores in winter with the larger hive.

2. Eight frames, $17\frac{5}{8}$x$9\frac{1}{8}$ inches. We do not use extracting supers.

3. I could not advise; that would depend entirely upon conditions. If you have made a success in running for both it may be best to continue that.

4. Yes.

5. $4\frac{1}{4}$x$4\frac{1}{4}$x$1\frac{7}{8}$, although we have tried others to a limited extent.

6 The present number (Aug. 28) is 221.

7. Mainly by nuclei.

8. We clip them, and could never see that it injured them.

9. We breed entirely for the honey-gathering qualities, and most of our bees are hybrids.

10. German wax-press. The only honey-extractor we have is the old Peabody extractor, but it is seldom used.

11. Some face east and some west. The first two hives in the row stand as near together as they can without touching, then a space of 3 or 4 feet, then another pair of hives, and so on. Another row is generally placed close up to this row, the hives standing back to back, making 4 hives in a group.

12. Our apiaries are mostly shaded by apple-trees.

13. No.

14. No, although it might be a good thing.

15. Nothing except the projection of the bottom-board—about 3 inches.

16. Not always as well as we might.

17. The bottom-board is about 3 inches from the ground.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to DR. C. C. MILLER, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Keeping the Wax-Worm Out of Sections

How do you handle supers of comb honey so as to keep the wax-worm out of the sections, when you want to keep the supers (or honey) a few weeks after taken off the hive? How long can it be kept so that the worms will not bother it? MISSOURI.

ANSWER.—I don't pay any attention to anything of the kind, and there is no trouble. But years ago there was trouble. The difference probably is that years ago I had black bees, and now there is much Italian blood. At that time I fumigated the sections with sulphur 2 or 3 weeks after taking off the sections, repeating the dose some 2 weeks later.

Winter Hive-Protection—Feeding for Winter

1. I am making some boxes to place over the hives to protect the bees through the winter. I would want them weather-tight. Would it be advisable to cover them with tar roofing paper? Or would the odor of tar be offensive to the bees?

2. What size opening must be left for them through the winter?

3. When is the proper time to start feeding for winter? ILLINOIS.

ANSWERS.—1. The tar on the outside will not trouble the bees.

2. An opening equivalent to 3 or 4 square inches.

3. August, if they can gather nothing later. In general, just as soon as possible after it is known that feeding will be necessary. Generally it ought not to be necessary.

Judging from Queen-Cells—Wax-Moths—Dead Brood Outside of Hive—Putting on Supers—Feeding Bees in Winter

1. After a queen-cell is sealed or capped, how many days will it be before the queen emerges, and can I tell by the outside of the cell whether she is a good queen or not?

2. Some days ago I discovered wax moths in my only weak colony, so I cleaned out and killed all the worms with the exception of a few which went out of the entrance, down into the grass. Is there any danger of their going back in the hive again? What shall I do if they should?

3. Is it a bad sign to see a few white brood dead out on the grass in front of the hive?

4. As I read in the American Bee Journal that as soon as the bees begin making white wax on top of the frames it is time to put on the supers, I tried it, but they have not started to work in them yet, although the supers have been on over 2 weeks. How can this be?

5. Can I feed bees in winter? With what kind of feeder could I do it the most easy and satisfactory way? How should I do it? WISCONSIN.

ANSWERS.—1. The queen should emerge something like 7 or 8 days after the cell is sealed. A cell with a good queen in it is likely to be of good size and well pitted over the surface with indentations. A cell with a poor queen is likely to be small, with a smooth surface. But there are exceptions; a good queen coming from a poor-looking cell, and *vice versa*.

2. It is not likely they will re-enter the hive, and if they do the bees ought to be able to take care of them, as they have now no web to defend them. But it will be no harm to look over the combs again, as others may be there that were too small for you to notice; and worms grow.

3. It is of no great significance so long as they are very few. But if there be any great number, look out for starving.

4. The white wax is a pretty good sign that the bees are getting more than will meet their daily needs, and that it is time to put on supers. But the weather and the yield are fickle affairs, and it may happen that after so good a promise there is no fulfillment. Let us hope, however, that in your case the cessation of storing is only temporary, and that a little later there may be a rushing business.

5. There is no need of it so long as you have the matter in mind this far in advance, and it is very much better to have the bees fully supplied before cold weather comes. Feeding in winter is not a thing to be advised, but if necessary it is better to give sealed combs of honey or candy.

Colony in a Box—Do Noises Disturb Bees?—Preparing for Winter—Basswood—Management Between Harvests

1. I have a colony of bees in an old box. What would you advise me to do with it?

2. Would the noise made by mowing the bee-yard bother the bees any? Does noise of any kind bother bees?

3. When should they be packed for winter?

4. About when does basswood bloom here?

5. Should the supers be left on between the two harvests? If not, how does one know when to put them on for the second harvest? IOWA.

ANSWERS.—1. A good way is to leave it where it is till it swarms next year. Put the swarm in a good hive; then 3 weeks later the worker-brood will be all hatched out, when you can cut open the box and dispose of the comb.

2. Noises in general do not trouble bees.

3. Better have the packing done early in November.

4. Probably about the first week in July.

5. Take them off when the first harvest is over, and put on again when you can tell by the flight of the bees that they are again storing. Sometimes there is no distinct break between the two flows, and you must keep something on all the time. In that case, get off all finished work at the close of the first harvest, and leave sections that have bees started. If you work for extracted honey, leave the supers on from one flow till the other, only extract all light honey at the close of the first harvest.

What Ails the Bees?

Early in March I purchased 2 colonies of common bees from a neighbor. We removed them from his apiary to my land, a distance or 600 or 700 feet. They were in old-style box-hives with glass on one side so that the honey and the bees could be seen. The hives were full of honey, and the bees seemed to be plentiful.

It seems strange to me that neither of the colonies cast a swarm this year, nor showed the least inclination to store honey in the supers. The bees of the colonies appeared to decrease in numbers after being located on my land, and although I have had them for 5 months, they do not seem to be any more populous or have any more honey on hand than when I first bought them.

My neighbor has about 20 colonies. Do you think some of the bees may have returned to their old home and united with the colonies there?

Inasmuch as they have neither increased nor produced honey for me this season, do you think that it would pay me to winter them, especially as they are common bees in old-style hives, and I notice infested with bee-moths?

I have been thinking of destroying my present outfit and trying again next spring with Italian bees in modern hives. What do you advise? NEW YORK.

ANSWER.—It is practically certain that when, with no precautionary measures, you removed those bees 600 feet, you gave notice to the field-bees that they should return to their old place. If, however, the colonies were what they ought to have been, they should have recovered from the set-back more than they appear to have done. Don't destroy them, however; if they winter satisfactorily they will be good capital to work on next spring. Seeing it's you, let me give you a word of advice. Take some time evenings, after your chickens have all gone to roost, to study up your text-book on bee-keeping, and after you are well informed, decide what you want to do with those bees next spring. If not entirely clear about it, send on any questions that occur, a little while before time for action, and they will be cheerfully answered in this department.

Bait for "Lining" Bees in the Woods

1. What kind of bait is the best for lining bees in the woods?

2. How can I set it so the bees will scent it?

3. When is the best time to use it? MICHIGAN.

ANSWERS.—1. Honey diluted with water, perhaps half and half. Some make a smudge by burning, and some flavor the bait with anise. Some make a smudge by burning old combs.

2. Set it out in the open in the woods where the bees are prospecting.

3. After the harvest is over, when there is little or nothing to be had from flowers.

Apiary Record-Book—Weak Colonies—Outdoor Wintering

1. On the first page for Aug. 3 I see you and your record-book. Now that record-book is just what I want, but I do not know just how to arrange it. I have some 50 colonies. My hives are numbered from 1 up with 2½-inch hand-painted figures. The hives are white and the figures black. Would you give us a sketch of a page?

2. I have 4 colonies that were hived just as the white clover flow was over, and they are rather weak. Each colony has brood. Is that a sure sign that they have a queen?

3. Would you take some frames from strong colonies and give to these weak ones? In this locality there is an abundance of Spanish-needle and goldenrod, which reach their height this month and next.

4. Which is the better for outdoor wintering, to take off the empty supers or to leave them on?

5. Shall I put straw pads over them or not? MISSOURI.

ANSWERS.—1. It is not at all certain that what suits one for a record-book will suit another, but I think you will find advantage in something that will give a permanent record of each colony. You will find it a great advantage to have contractions for the more common entries—and a great many entries will be alike—no matter what the contractions may be, only so you will understand them yourself. Although it may be no model for you to follow, I cheerfully give you a transcript of one colony, the one that I think has done the poorest of any in the home apiary, chiefly due to the fact that it started in with a poor queen, and further to the fact that its present queen is of the same stock:

"May 3 q cl g 1 br & b in 4 1 sc 23d in 4 3sc 30th soq sv Jun 12 cl OK." That's the whole of the entry for that one colony for the season, and all the entries there will be, unless I kill its queen and give it a better one—a thing that a better bee-keeper would have done before this.

Translated into U. S. language, the record would read:

"On the 3d of May I overhauled the colony and found that the queen was clipped; I gave to the colony 1 frame of brood with the adhering bees, and that made it have brood in 4 frames. I also found present a sealed queen-cell; May 23, I found brood in 4 frames, and 3 sealed queen-cells; May 30 I saw the old queen, and also saw a virgin queen. June 12 I clipped the young queen which I found laying; then marked it 'OK' to indicate that there was no need to go into the hive again."

Here's a record that is more satisfactory, not of the best colony, but one of the best, which, up to Aug. 1, gave 120 sections, with more to be heard from:

"Apr 22 q cl May 2 5br 10th t 2 br & b 4br Jun 22 noc July 12 noc 22d noc Aug 1 noc." And that's all the writing there will be about that colony, probably, except the figures showing the number of sections taken. In fuller language: April 22 I found that the queen was clipped; May 2 that there were 5 frames of brood; May 10 I took away 2 frames of brood with adhering bees, leaving 4 frames of brood; and the "noc" at the four remaining visits means that no queen-cells were started.

2. No, there may be brood in the hive and no queen, the queen having been taken away since she layed the eggs that produced the brood. There may also be brood from laying workers. But as you gain experience you will readily tell by the appearance of eggs and brood whether it be the work of a normal laying queen. If the eggs are evenly distributed, and the cappings of the sealed brood be not raised like so many little marbles, you are pretty safe in saying it is the work of a laying queen.

3. Sometimes it is advisable to take from the strong and give to the weak, and sometimes it is not. It may pay where, as with you, there is a fine late flow.

4. It is better generally to take them off.

5. Not many use straw pads, but they are good things.

Reports and Experiences

Honey Crop a Complete Failure

The honey crop has been a complete failure in this State this year. There is not a single pound of surplus that I know of anywhere in the State, and lots of bees starved to death in May and June, the very time we usually get a big surplus. Those that survived are getting in good shape now on cotton.
W. M. Bailey.
Spartanburg Co., S. C., Aug. 3.

Distance Bees Fly for Nectar—Light-Weight Sections

There has been considerable discussion the last few years in regard to how far bees will fly and store surplus honey. A few years ago I got over one ton of buckwheat section honey from about 50 colonies, and it was carried 5 miles. The bees in the forenoon flew almost entirely in one direction. There was, 2 miles away, 4 acres of buckwheat, and 5 miles away, in the same direction, 60 acres of it. The conditions were favorable for a honey-flow—moist and hot weather. Afternoons they worked on goldenrod, and flew in all directions. There was no other buckwheat in that vicinity that I could hear of.

As to light-weight sections, the honey-producer would not know the difference in cost to him, between sections averaging one pound and lighter sections. The sections, shipping-cases, foundation and work are all the same, and the bees will fill a 24-pound case about as quickly as an 18-pound one in a good flow.
C. M. Tarr.
Chippewa Co., Wis., Aug. 19.

Very Poor Season for the Bees

I put 97 colonies of bees into winter quarters last fall. Some of them winter-killed, and some starved with plenty of stores, and by the time they got through dwindling and robbing I had just 55 left, and they were very weak. By the time they built up and were ready for the supers it was June 10. Then it turned dry, and white clover failed. The first 2 weeks in July were cold and rainy, and the bees have been hanging about the hives more or less ever since. But they have done the best job of gluing I ever saw.
Sangamon Co., Ill., Sept. 1. S. T. Crim.

Not a Good Season

The season has not been especially good for the bees so far, but I will have a fair return for my work if the fall flow proves good.
Robert B. McCain.
Grundy Co., Ill., Aug. 5.

Method of Rearing Queens

I am not a baby-nucleus queen-breeder. I use the full-size frame, and regular Langstroth hive, with a solid division-board in the center, with entrance at front for A, and at back for B—opposite corners. Many of my nuclei now have bees enough in them to unite A and B, after removing one queen, and still be strong enough to go through a moderate winter safely.

Instead of distributing queen-cells on the evening of the tenth day, as per Doolittle's instructions, I allow them to remain in the full colony until the next morning, thus getting the benefit of the heat of a full colony all night, and then hatching in a strong nucleus before a cool night comes on them. I claim that by this method, there is no checking in the development of a queen; that this approaches as near to Nature's way as it is practicable to do in commercial queen-rearing.
John M. Davis.
Maury Co., Tenn., Aug 3.

The Partridge Pea

Is the sample plant which I am sending you honey-producing? M. A. Stone.
Ida Co., Iowa, Aug. 14.

[The plant is the partridge pea, Cassio chamæchrista. The yellow flowers are very conspicuous in swampy land, and the bees easily find the nectar hidden at the base.

Prof. Cook, in the Bee-Keepers' Guide, page 429, says, "The partridge pea furnishes abundant nectar and....has extra floral as well as floral glands."—C. L. Walton.]

Queen-Excluding Honey-Boards

I used to buy queen-excluding honey-boards, but have found what is for me a cheaper and better way. The wood and zinc-boards interfere too much with ventilation, and come too high. The wood-bound zinc costs too much. The unbound zinc-boards are generally too short and too narrow, and cost more than they would if one buys a large sheet of zinc and cuts it up to suit himself. This is what I do, cutting the zinc up as large as the top of the hive, outside measure. In order to preserve the bee-space below I put a ¼-inch strip of wood across the center of the brood-frames, and, in order to make a bee-space above the zinc I nail a strip of lath around the outside edges of the zinc, or else nail the lath to the bottom edges of the super. Sometimes the bee-space below the zinc will be preserved by the burr-combs on top of the brood-frames. I do not want any wood between the top of the brood-frames and the super.
Edwin Bevins.
Decatur Co., Iowa, Aug. 7.

CONVENTION NOTICES.

National.—The International Fair is to be held in San Antonio, Tex., Oct. 21 to Nov. 1. When this Fair is in progress there are very low rates in force on the railroads out for 600 or 700 miles. Then there are harvest excursions from the North on the 2d and 4th Tuesdays of the month. The 4th Tuesday in October comes on the 24th. Considering these facts, it has been decided to select Saturday, Oct. 28, as bee-keepers' day at the Fair. This will give ample time for members from the North to reach the city by starting the 24th. The regular sessions of the convention will begin Monday, Oct. *30, and continue three days.*

The headquarters of the National Association will be at the Bexar Hotel (pronounced Baer, long sound of a), corner of Houston and Jefferson Sts., and rates are only $1.00 a day, and up. The convention will be held at Elks' Hall, 125 W. Commerce St., only two blocks from the Bexar Hotel.
Flint, Mich. W. Z. Hutchinson, *Sec.*

Illinois.—The Western Illinois Bee-Keepers' Association will meet in the County Court Room, in Galesburg, Ill., on Wednesday, Sept. 20, 1905. All are invited to come.
E. D. Woods, Sec.

New York.—The Fulton and Montgomery Counties Bee-Keepers' Society will hold the next meeting on Wednesday, Sept. 20, 1905, at the Central Hotel, Amsterdam, N. Y. The annual election of officers will take place at this meeting, and also two delegates will be appointed to attend the meeting of the State Association at some time during the coming winter, and also any other business which may come up at this meeting. All are invited to come and bring your bee-keeping friends.
West Galway, N. Y. T. I. Dugdale, Sec.

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Bees, Queens and Nuclei

Choice home-bred and Imported stock. All queens reared in full colonies.

One untested queen..... $ .65
One tested queen......... .90
One select tested queen.. 1.10
One breeding queen 1.65
One comb nucleus (no queen).................. 1.00

All grades ready to send by return mail.

Safe arrival guaranteed. For prices on quantities and description of each grade of Queens, send for free price-list. 100 or 200 lbs. of Brood Foundation. Send for sample and prices.
J. L. STRONG.
204 East Logan Street, CLARINDA, IOWA.
14Atf Please mention the Bee Journal.

FOR SALE

12 sixty-pound cans white clover EXTRACTED HONEY. This was stored in combs free from pollen and in which no brood had been reared. The honey was practically all sealed when extracted. 8 cts. per pound on cars here.
EDWIN BEVINS,
37A1t LEON, IOWA.

Queen-Clipping Device Free!

The Monette Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. It is used by many bee-keepers. Full printed directions sent with each one. We mail it for 25 cents; or will send it **FREE** as a premium for sending us **One** New subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,
GEORGE W. YORK & CO.,
CHICAGO, ILL.

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Best Bee-Hives, Sections, Comb Foundation, and everything the bee-keeper needs. Now is the time to buy for next season's use. **Special Discount on all bee-supplies not now in season. Lewis' Goods at factory prices.** Catalog free.

Honey-Packages for Marketing Honey

Such as Shipping-Cases, Tin Cans, Buckets, **Glass Jars with patent spring sealers and glass stoppers**; regular Glass Fruit-Jars, etc. Sample cases for sending samples of extracted honey by mail. Special prices on Glass Honey-Jars and Tin Buckets.

Fine Italian Queens by Return Mail

Untested Queens	$ .75	Tested Queens	$1 00
Select Untested Queens	1.00	Select Tested Queens	2.00

New Crop Extracted Honey

We have an abundance of the finest honey in the world. Can ship in cans and barrels. If you can't supply the demand in your locality write to us at once and tell us how much you can use; 10 cents for sample by mail, but we return the 10 cents with your first order.

Paint for Houses, Barns and Roofs

We can furnish any quantity of any grade of paint on short notice. Special prices on absolutely pure paint. Let us quote on paint for your house.

Write to-day and tell us what you want in our line, and how much. **Best service, lowest freight rates, satisfaction to all.**

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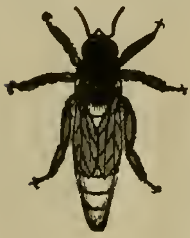
INDIANAPOLIS, IND.



Tennessee Queens

Owing to the great demand for my Tennessee Queens for several seasons, and the quantity of standing orders from old customers, I decided not to advertise until my books were cleared of orders, and thus avoid disappointing customers.

I am now ready to fill orders by **RETURN MAIL**. Breeders used: Imported dark leather-colored Italian; my selections from light imported Italian; Moore's long-tongue; golden; Carniolan (mated to Carniolan drones in distant yard, and to Italian drones); imported Caucasian (lately received, mated for the present to Carniolan and Italian drones).

Prices until Oct. 1.		After Oct. 1.			
Untested 12 for	$6.00	Untested 12 for	$7.50	Tested—Each	$1.50
" 6 for	3.25	" 6 for	4.00	Breeders—Each	3.00
" 1 for	.60	" 1 for	.75		

27A13t

JOHN M. DAVIS, Spring Hill, Tenn.

40-Page Catalog Free!

Full information regarding all kinds of BEE-KEEPERS' SUPPLIES. Best goods. Latest improvements. Danzenbaker Hives and Fixtures. Prompt shipments. JOHN NEBEL & SON SUPPLY CO., High Hill, Mo. 3Dtf

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ITALIAN QUEENS

	1	3	6
Untested	65c	$1.75	$3.00
Tested	90c	2.40	4.50

Safe arrival guaranteed.

JOHN LEININGER, Ft. Jennings, Ohio

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Send for Our 1904 Catalog and Price-List.

OUR HIVES AND SECTIONS

Are Perfect in Workmanship and Material.

By sending in your order NOW, you will SAVE MONEY, and secure prompt shipment.

PAGE & LYON MFG. CO., New London, Wis. U.S.A.

87½ Percent Saved

In mortality to those insured in the

TOTAL ABSTINENCE DEPARTMENT

—OF—

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Each Policy Holder is entitled to a Bond issued by the National Total Abstinence League.

YOU may hold a policy and BOND.

General and special agents wanted. Address,

3D28t A. S. RENNIE, Mgr., 614 Marquette Bldg., Chicago, Ill.

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We can ship by return freight at the following prices:

½-lb. Jars with corks—1 case of 21 doz. for $5.50; 3 cases, $15.50.

¾-lb. Tiptop Jars—1 case of 14 doz., for $5 25; 3 cases for $15.

1-lb. Tiptop Jars—1 case of 12 doz., for $5; 3 cases for $14.

Second Hand... Comb Foundation Mills

We have for sale a 6-inch and a 10-inch Second-Hand Comb Foundation Mill. Used scarcely any; good as new. If interested write for prices.

YORK HONEY AND BEE SUPPLY CO.
(Not incorporated)
141 Ontario Street, - CHICAGO, ILL.

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4 Largest Sizes Soot Burning

Never Go Out

And last from 5 to 21 years

BINGHAM Original Direct Draft CLEAN Bee Smokers

Pat'd 1878, '82, '92 & 1903

Tin 4-in. Smoke Engine	3½-inch	3-inch	2½-inch	2-inch Wonder
$1.50.	$1.10.	$1.00.	90c.	65c.—per mail.

Sent on receipt of price per mail.

T. F. BINGHAM Farwell, Mich.

Otisville, Pa., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine.

Fred Fodner.

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If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published, send $1.20 to

Prof. A. J. Cook, Claremont, Cal.,

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"Bee-Keeper's Guide."

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33—36A4t

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How the Canadians Like Moore's Strain of Italians

J. L. Byer, Markham, Ont., Can., says:

"I use a very large hive and have been getting Italian stock from different breeders, and yours are the only Italians that fill up my big hives with rousing big colonies. They winter splendidly, out-doors, are hustlers after honey, and not one queen has yet cast a swarm."

Untested Queens........................75c each; six, $4; dozen, $7.50
Select Untested.........................$1 00 each; six, $5; dozen, $9.00

Descriptive circular free. I am now filling orders by **return mail**, and shall probably be able to do so until the close of the season.

29Dtf **J. P. MOORE, Rt. 1, Morgan, Pendleton Co., Ky.**

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And Prompt Shipments

Is what we are making for our customers.

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Standard-Bred Untested Italian.... Queen, 60 cents

2 for $1.10, or 6 or more at one time, 50 cents each. The Weekly American Bee Journal one year (either new or renewal subscription) with one of these fine Queens—both for $1.30. Better have one or more of the Queens. They give satisfaction. Remember, the above offers expire Oct. 1, 1905. First come first served.

An Untested Italian Queen-Bee FREE as a Premium

For Sending One New Subscriber

for the American Bee Journal for a year with $1.00.

As has been our custom heretofore we offer to mail a fine Standard-Bred Untested Italian Queen to the person who complies with the following conditions, all of which must be strictly followed:

1. The sender of a new subscriber must have his or her own subscription **paid in advance** at least to the end of this year.

2. Sending your own name with $1.00 for the Bee Journal will not entitle **you** to a Queen as a premium. The sender must be already a paid-in-advance subscriber as above, and the new subscriber must be a **NEW** subscriber; which means, further, that the new subscriber has never had the Bee Journal regularly, or at least not for a whole year previous to his name being sent in us a new one; and, also, the new subscriber must not be a member of the same family where the Bee Journal is already being taken.

We think we have made the foregoing sufficiently plain so that no error need be made. Our Premium Queens are too valuable to throw away—they must be **earned** in a legitimate way. They are worth working for.

Address all orders to

GEORGE W. YORK & CO.
334 Dearborn Street, CHICAGO, ILL.

Capital City Apiary!

Fine Italian Queens

Untested, after June 15, 75c; Tested, $1.00; Breeders—the very best, $5.00. Terms cash with order. Safe arrival and satisfaction guaranteed. **WALTER S. HOSS,**
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Your Bee-Hives, Sections, Shipping-Cases, Berry Boxes, and Crates for the coming season. By sending us a list of goods wanted, we can save you money.

SHEBOYGAN FRUIT BOX CO.
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PURE ITALIAN BEES

The most beautiful, gentle, prolific, best working, and, being long tongued, best honey-gatherers. **PRIZES** — VI. Swiss Agricultural Exhibition, Berne, 1895; Swiss National Exhibition, Geneva, 1896; Bee-Keeping Exposition, Liege, Belgium, 1895; Universal Exposition, St. Louis, U. S. A., 1904. **THE HIGHEST AWARD.** Extra Select Breeding Queen, $3.00; six, $16.00; dozen, $30.00. Selected Queen, $2.00; six, $11 00; dozen, $20.00. Special prices on larger number. The addresses must be clear; payments by postal money orders. If by chance a queen dies upon the journey she is to be returned immediately, with a postal certificate, and another queen will be sent gratis. Address

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This country is politically the Switzerland Republic, but lies geographically in Italy, and possesses the best kind of bees known. In writing mention the American Bee Journal.

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Lowest Prices

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The best magazine for beginners. (It has been published by us regularly for 15 years.)
Address,
THE W. T. FALCONER MFG. CO.,
JAMESTOWN, N. Y.

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PURE BASSWOOD HONEY
IN 60-POUND CANS

We have a good supply of **Pure Basswood Honey** in 60-lb. cans that we can ship by return freight at these prices: 1 can in a box, at 8 cents a pound; 2 or more cans, boxed, at 7½ cents—all f.o.b. Chicago. Cash with order. Sample, by mail, 8 cents in stamps, to cover package and postage.
Address,
YORK HONEY AND BEE SUPPLY CO.
141-143 Ontario St., CHICAGO, ILL.

Shipping-Cases PLENTY FOR ALL

Made of Michigan white pine; 24-lb., $13; 12-lb., $8; 20-lb. Danzy, $11 per 100; less than 100 lots, ½c more each; 3-in. glass, 1c each more; No. 1 Sections, $4; No. 2, $3.50 per 1000. All kinds of Supplies kept in stock. Send for list. **W. D. SOPER.**
Rural Route 3, JACKSON, MICH.
27Dtf Please mention the Bee Journal.

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When consigning, buying or selling, consult
R. A. BURNETT & CO.,
199 SOUTH WATER ST. CHICAGO, ILL.

NEW COMB HONEY-CROP OF 1905
We believe it would pay those having it in car lots or otherwise to write us. Give us your lowest spot cash prices, and fully describe the goods and style of package; when you can ship, etc. We handle more of these goods than any other firm in the U.S. Yours for business,
THOS. C. STANLEY & SON, Bees and Honey
MANZANOLA, COLO., and FAIRFIELD, ILL.
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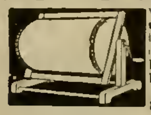

with lice on poultry. Schild's Lightning Lice Killing Machine instantly removes them from tiniest chick or fat gobbler. 3 sizes. Also Poultry Bits, Lice Murder, Lightning Lice Killing Powder, etc. Catalog free.
CHARLES SCHILD CO.,
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Headquarters for Bee-Supplies
ROOT'S GOODS
At Root's Factory Prices
Complete stock for 1905 now on hand.
Freight rates from Cincinnati are the lowest,
ESPECIALLY FOR THE SOUTH, AS ALL FREIGHT NOW GOES THROUGH CINCINNATI.
10 Percent Discount
For Cash Orders Received in
SEPTEMBER
This applies to all goods with exception of Shipping-Cases and other Honey-Packages for current use.
C. H. W. WEBER CINCINNATI ...OHIO...
Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

Honey and Beeswax

CHICAGO, Aug. 18.—The demand has absorbed all the offerings of fancy and A No. 1 grades of white comb honey at 14c, while No. 1 has sold at 13@13½c. No call at present for other than the best grade, it really being difficult to place what ordinarily is called No. 1. Extracted, white, 6@7c; amber, light and dark, 5@6c. Beeswax, 28c. R. A. BURNETT & CO.

ALBANY, N.Y., July 26.—There is some call for honey, new crop, and if here would probably sell for best prices of season, as the general impression is there will be a large crop. White comb honey will start off at 15c to early buyers.
H. R. WRIGHT.

KANSAS CITY, Aug. 24.—The honey market here shows a decided improvement and the market is firm at $2.85 to $3.00 for No. 1 and fancy white comb in 24 section cases. Amber and other grades are selling for less, according to quality. Extracted in fair demand, white selling at 6½ cents; other grades down to 4½c. Beeswax, 28c. C. C. CLEMONS & CO.

DENVER, June 26.—The demand for both comb and extracted honey is light at present, and there is enough of old stock on hand yet to last until the new crop comes in; the same is selling as follows: No. 1 white comb, per case of 24 sections, $2@$2.20; No. 2, $1.75@$2. White extracted, 6½@7½c per pound. Beeswax, 26c.
THE COLO. HONEY-PRODUCERS' ASSN.

CINCINNATI, O., Sept. 8.—It appears by this time, that comb honey will not be so plentiful. In some parts of the West the crop has been more or less a failure. Prices so far have not changed much yet. Fancy white comb, 13@15c. Extracted seems to be more plentiful. In barrels, light amber, 5¼@5½c; in cans, ½c more; white clover from 7@8c. Beeswax, 26c.
C. H. W. WEBER.

INDIANAPOLIS, Sept. 2.—There is a good demand for strictly fancy white comb honey, demand and supply running about even. Demand for lower grades of comb honey not good. Numerous shipments of honey arriving, but no one producer seems to have very great quantities to offer. I quote fancy white at 14@15c; No. 1 in poor demand at 12c, and amber dull at 10c. Best grade extracted brings 8@9c in 60-lb. cans; amber slow at 5c. Beeswax, 28@30c.
WALTER S. POUDER.

NEW YORK, Sept. 7.—New crop of comb honey is now arriving in a small way and fancy stock finds ready sale at 14@15c per pound; No. 1, at 12@13c, and amber at 11c. No buckwheat on the market as yet. Extracted in good demand, and we quote California at 6@7½c per pound, according to quality; Southern at from 55@65c per gallon; white clover at 6½@7c per pound. Beeswax steady at 29c per pound.
HILDRETH & SEGELKEN

PHILADELPHIA, Aug. 21.—Some honey arriving, with prospects of a good crop all through the East, but no call for comb honey during the hot weather, so that prices are not as yet established. Extracted honey arriving freely. We quote as follows: Fancy white, 7@8c; amber, 6@7c. Beeswax, 27c.
We are producers of honey and do not handle on commission. WM. A. SELSER.

CINCINNATI, Sept. 7.—There is little to report since our quotation two weeks ago. The supply of both comb and extracted honey is fair, and the demand is good. We offer extracted honey as follows: Amber, in barrels and cans, at 5¾@6½c, respectively. White clover at 7@8½c. Fancy white comb honey at 12@15c. Beeswax, 29 cents. THE FRED W. MUTH CO.

SAN FRANCISCO, Aug. 30.—White comb, 1-lb. sections, 9@10 cents; amber, 7@8c. Extracted, water-white, 4¾@5c; white, 4¼@4½c; light amber, 3¾@4 cents; amber, 3@3½c; dark amber, 2½@3c. Beeswax, good to choice, light, 26@27c.
Honey is now a drug on the market and is moving off very slowly. Receipts are coming in freely and are of first-class quality, running very light in color this year. Prices on all varieties show a slight weakening, owing to an extremely sluggish demand, it having been thought that some of the large holdings might be moved at a slightly lower figure.

FOR SALE
Until further notice, finest quality new crop California Water-White White Sage and Light Amber HONEY in 60-lb. tins, 2 in a case; new cans and new cases. Write for prices and samples, and state quantity you want.
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265 & 267 Greenwich Street, NEW YORK, N.Y.
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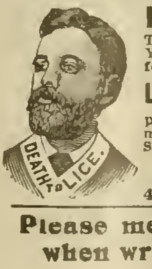
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That's how they live and thrive. You can't have healthy, profitable fowls or stock and have lice too.
Lambert's Death to Lice
promptly kills all insect vermin and makes sitting hens comfortable. Sample 10c; 100 oz., $1.00 by express.
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9 percent during October.
8 percent during November.
7 percent during December.
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This applies to all goods excepting Honey-Packages for current use.

On receipt of the names and addresses of 5 bee-keepers in your vicinity we will mail to any address free of charge postpaid a copy of our little book, "Bee Pranks," which is a pamphlet compiled from newspaper clippings containing many laughable and interesting anecdotes which have actually happened in the life of the bee. Published only by **G. B. LEWIS CO., Watertown, Wis., U.S.A.**

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U. S. A.

National Bee-Keepers' Convention at Chicago, Dec. 5, 6, 7

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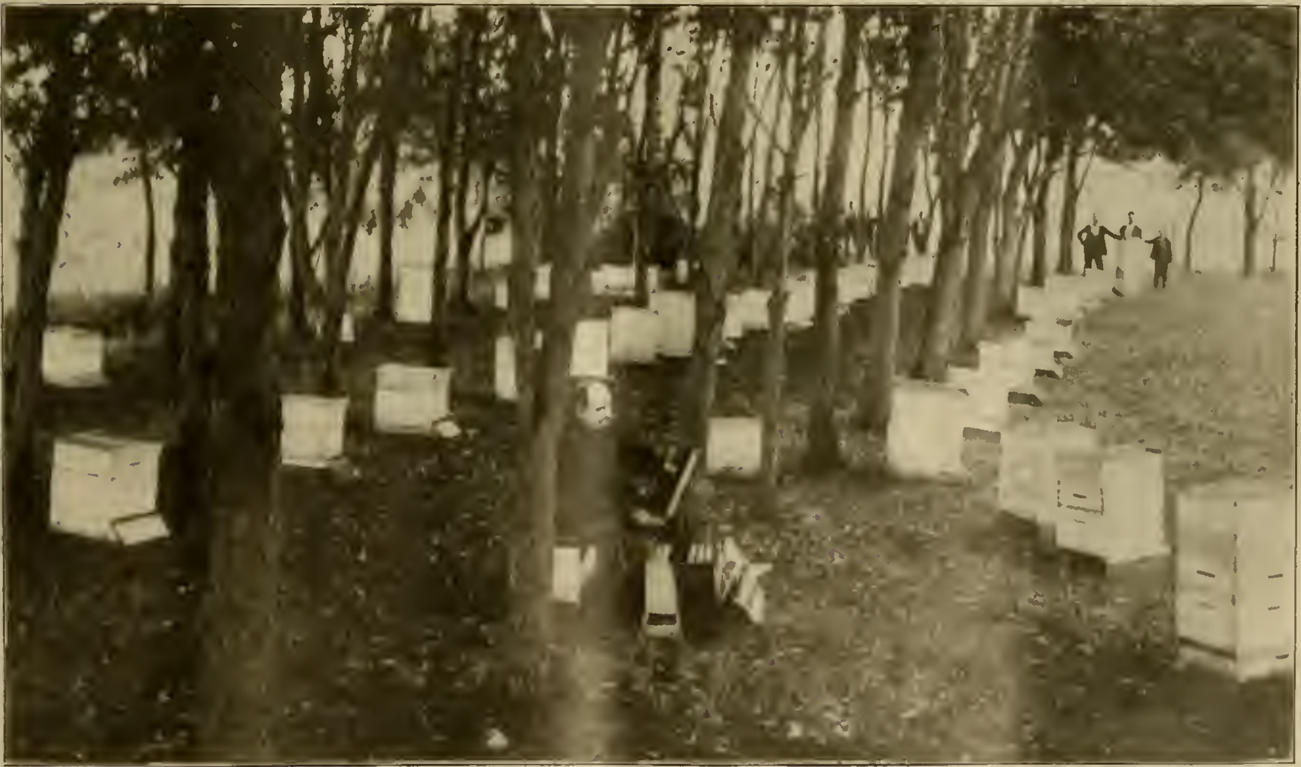

MR. J. P. BLUNK AND APIARY—WEBSTER CO., IOWA.
(See page 663)

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY
GEORGE W. YORK & COMPANY
334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

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THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec05" on your label shows that it is paid to the end of December, 1904.

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Objects of the Association

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00

General Manager and Treasurer—
N. E. FRANCE, Platteville, Wis.

☞ If more convenient, Dues may be sent to the publishers of the American Bee Journal.

The Honey-Producers' League

(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

MEMBERSHIP DUES

1. Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.
2. Any honey-dealer, bee-supply dealer, bee-supply manufacturer, bee-paper publisher, or any other firm or individual, may become a member on the annual payment of a fee of $10, increased by one-fifth of one (1) percent of his or its capital used in the allied interests of bee-keeping.

GEORGE W. YORK, Manager,
334 Dearborn St., CHICAGO, ILL.

Italian Queen-Bee Free as a Premium

To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us ONE NEW subscription with $1.00 for the Bee Journal a year. Now is the time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.

IN THE HEART OF MICHIGAN

Within a hundred miles of me are over ¾ of the bee-keepers of Michigan. I am on the Pere Marquette R.R., which completely covers this region. **Root's Goods, Factory Prices, Prompt Service, Low Freight.** Send for Catalog.

GEORGE E. HILTON,
28A12t FREMONT, MICH.

FINE QUEENS By Return Mail From my 3 and 5 banded Long-Tongued Italians. Equal to any for honey-gathering and gentleness.

MR. CHAS. M. DARROW, Dear Sir:—The bees and queen received in good condition, only a few dead bees; indeed, it is a fine queen, and the bees are No. 1. Thanking you for the same,
Yours truly, J. J. VOSBERG.
Peach Orchard, Ark., Aug. 19, 1905.

Select Tested (or Warranted Tested) $1 each. No disease. I guarantee all queens perfect, to arrive safely, and give reasonable satisfaction.

CHAS. M. DARROW.
23Atf R. F. D. No. 1. MILO, MO.

"If Goods are wanted Quick, send to Pouder"

BEE-SUPPLIES

Root's Goods at Root's Prices

Everything used by Bee-Keepers.
POUDER'S HONEY-JARS. Prompt Service.
Low Freight Rates. Catalog Free.

If you wish to purchase finest quality of HONEY for your local trade, write for my free monthly price-list of honey.

Why not secure your BEE-SUPPLIES NOW FOR NEXT SEASON'S USE, and avail yourself of the following very liberal discounts? Goods all Root Quality.

	Percent		
For cash orders before Oct. 1	10	For cash orders before Jan. 1	7 percent
For cash orders before Nov. 1	9	For cash orders before Feb. 1	6 percent
For cash orders before Dec. 1	8	For cash orders before Mar. 1	4 percent
		For cash orders before Apr. 1	2 percent

WALTER S. POUDER,
513-515 Massachusetts Ave., INDIANAPOLIS, IND.

Please mention Bee Journal when writing.

DITTMER'S FOUNDATION IS THE BEST

Now is the time to prepare for next season.

If You Want to Save Money on Foundation, Working Wax for Cash, and on a full line of SUPPLIES, write for prices and discounts, and samples of our Superior Foundation.

E. Grainger & Co., Toronto, Ont., Agents for Canada.
The Bee and Honey Co., Beeville, Tex., Agents for Texas.

GUS. DITTMER, - Augusta, Wis.

Please mention Bee Journal when writing.

IT'S TIME TO FEED

Feeding time is here and you will want feeders. There are none better made than the Miller-Boardman Entrance Division-Board Feeder and the Simplicity Bottom-Board Feeder. They can be attached to the bottom-board and left all the year around. Are made on honor and sold direct from the factory to you, saving you a middleman's profit.

Your orders will receive prompt attention. Send them early.

Don't fail to send us your address for our new catalog, which will be very comprehensive, and will give you many valuable pointers upon bee-keeping.

JOHN DOLL & SON,
Power Building, - - MINNEAPOLIS, MINN.

Please mention Bee Journal when writing.

10 percent Discount On orders accompanied by cash sent us in SEPTEMBER. This applies to all goods excepting Honey-Packages for current use.

BY RETURN FREIGHT OR EXPRESS. Send to

H. M. ARND, Mgr. YORK HONEY AND BEE SUPPLY CO. (Not Inc).
141 & 143 Ontario Street, CHICAGO, ILL.
(5 short blocks north of the C. & N. W. Ry. Passenger Station, using the Wells St. Cable Line from center of city to Ontario St.)
Long Distance Telephone—North 1559

Catalog and prices on Honey on application. If you want **Good Goods at Factory Prices and Prompt Shipment,** send your orders, or call on us.

BEESWAX WANTED—26c cash, or 28c when taking Bee-Supplies in exchange—delivered here.

Please Mention the American Bee Journal when writing Advertisers

# "DADANT'S FOUNDATION"

—AND—

BEE-SUPPLIES

Revised Prices on Foundation

IN LOTS OF

NAME OF GRADE	1-lb.	5-lbs.	10-lbs.	25 lbs.	50 lbs.
Medium Brood	.55	.53	.51	.49	.48
Light Brood	.57	.55	.53	.51	.50
Thin Surplus	.62	.60	.58	.56	.55
Extra Thin Surplus	.65	.63	.61	.59	.58

DISCOUNTS for Early Cash Orders

During	September	10	percent
"	October	9	"
"	November	8	"
"	December	7	"
"	January	6	"
"	February	4	"
"	March	2	"

Beeswax Wanted at all Times.

* * *

DADANT & SONS, Hamilton, Ill.

WANTED

FANCY COMB HONEY IN NO-DRIP SHIPPING CASES, ALSO EXTRACTED HONEY. IF YOU HAVE ANY TO OFFER, QUOTE US YOUR ROCK BOTTOM CASH PRICE DELIVERED HERE, AND MAIL US A SMALL SAMPLE OF THE EXTRACTED HONEY. WE BUY EVERY TIME THE PRICE IS RIGHT, AND REMIT PROMPTLY.

THE FRED W. MUTH CO.

No. 51 WALNUT STREET, CINCINNATI, OHIO.

Bee-Supplies!

We carry a large stock and greatest variety of everything needed in the Apiary, assuring best goods at lowest prices, and prompt shipments. We want every bee-keeper to have our **Free Illustrated Catalog,** and read description of Alternating Hives, Massie Hives, etc. **Write at once for Catalog,** either English or German language.

KRETCHMER MFG. CO., Red Oak, Iowa.

—AGENCIES—

Trester Supply Co., Lincoln, Neb.

Shugart & Ouren, Council Bluffs, Iowa.

Fulton & Ford, Garden City, Kansas.

I. H. Myers, Lamar, Colo.

Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex.

Get New Subscribers

Why not get a New Subscriber for the American Bee Journal, to send with your own renewal?

DEATH TO LICE.

LOSS BY LICE

on poultry amounts to many times the cost of **Lambert's Death to Lice**—the sure preventive. Loss can be saved and profit made by its use. Frees sitting hens from lice without harming eggs or chicks. A trial 10c box will prove it. 100 oz., by express, $1.00.

O. K. STOCK FOOD CO.,
D. J. Lambert, Vice-Pres.
406 Monon Bldg., Chicago, Ill.

Bee-Keepers' Early Discounts

◆

Now is the Time to send in your order for goods for use next season, and for all orders where cash accompanies we allow the following discounts:

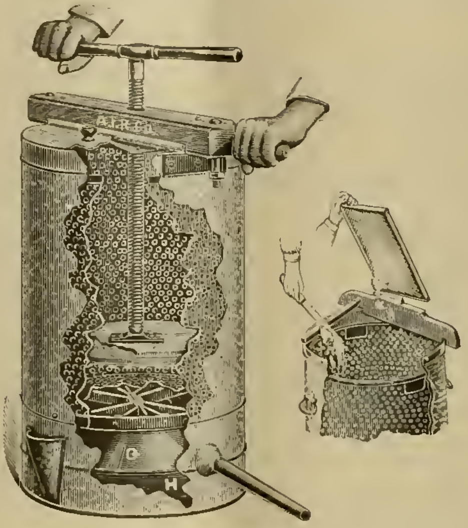
Before	October 1	deduct	10	percent
"	November 1	"	9	"
"	December 1	"	8	"
"	January 1	"	7	"
"	February 1	"	6	"
"	March 1	"	4	"
"	April 1	"	2	"

Freight-Rates from Toledo are the lowest. Can take **Honey and Beeswax** in exchange for Supplies if you desire. Send for free illustrated Catalog. It describes and illustrates everything for both the **Poultry and Bee Keepers.**

GRIGGS BROS.
521 Monroe Street,
TOLEDO, - OHIO.

Please mention Bee Journal when writing

GERMAN WAX-PRESS



Save all of your old comb, scraps of wax and slumgum, and instead of allowing them to become scattered or worm-eaten, or rendered in some wasteful method, put them into a German Wax-Extractor and you will be surprised at the amount of wax you can obtain and profits make. With a German Wax-Press you can get every particle of wax out of old combs. Much of the slumgum from solar extractors and other machines contains a very large percentage of wax that can be separated with our machine. Indeed, some bee-keepers buy up all the slumgum they can, and with the use of a German Wax-Press make excellent profits from what otherwise would have been thrown away.

Our Press may also be used as a honey-press. Loose or broken chunks of honey that are too small for an extractor may be extracted in this Press without application of heat, and the honey be as good as though extracted in the ordinary way. With every Wax-Press we furnish an uncapping arm. This arm, with scraping stick, is slipped over the edge of the can with the basket in place. The cappings drop down into this and are drained. This machine, therefore, serves three purposes, and is almost indispensable in any well-regulated apiary.

The machine is made in the best possible manner. The cross arm is of the best selected oak, and will stand any strain. Bolts projecting through the ends of the arm engage with corresponding ears on the can in such away that a side circular movement instantly releases it.

Before closing I wish to say that Mr. E. R. Root is right when he says, "You can't get over 50 percent of the wax until you use a first-class press for your work." And I want to say when you get a press, buy a German. They are neater, can be used on a kitchen stove, make a fine honey-press and excellent uncapping can, and will be the most satisfactory in the end. I will trade my home-made outfit for one if I ever get a chance. PERRY ORTON.
New York, Aug. 9, 1905.

I am well pleased with the German Wax-Press. Felt that in one day's work it had more than earned its cost. W. J. OATES.
California.

I was inclined to believe at first that the German Wax-Press was a failure, but after a thorough trial was well pleased. Secured 30 pounds more wax from one day's use of the machine than I would have secured by the ordinary method of rendering.
Illinois. B. WALKER.

Wax from old slumgum that had been worked over by another party and declared to be free from wax, I got nearly 50 pounds from only a little over 100 pounds of the stuff. E. T. FLANAGAN.
Illinois.

Cash Discount for Early Orders

We can not remember a year when we were not crowded with orders through the spring months, and somewhat behind, some years more than others. In order to divert some of this trade to the fall and winter months, we have offered inducements in the way of an early-order cash discount. This year we will be more liberal than ever before in the amount of discount allowed. For some months the price of some of the materials used has been a little lower, and we have stocked up heavily, and propose giving you the advantage of the saving in price. The abundant farm crops throughout the country are stimulating trade in almost all lines, and prices are already stiffening. The discounts which we propose to offer for early cash orders are as follows:

For cash orders before Oct. 1......................10 percent.
" " Nov. 1...................... 9 "
" " Dec. 1...................... 8 "
" " Jan. 1...................... 7 "
For cash orders before Feb. 1......................6 percent.
" " March 1...................... 4 "
" " April 1...................... 2 "

You will notice that, after January, the discount drops 2 percent a month; and if we find that advancing prices of materials do not warrant the larger discount, we reserve the right to reduce the amount of discount at any time. Your safest plan is, therefore, to order at once.

This discount is only for cash before the dates named, and is intended to apply to hives, sections, frames, foundation, extractors, smokers, shipping-cases, cartons, and other miscellaneous bee-keepers supplies. It will not apply on orders for the following articles exclusively; but where these form no more than about 10 percent of the whole orders, the discount may be taken from the entire bill: Tinned wire, paint, Bingham smokers, Porter bee-escape, glass and tin honey-packages, scales, bees and queens, bee books and papers, labels and other printed matter; bushel boxes, seeds, and other specialties not listed in our general catalog.

The A. I. Root Company, MEDINA, OHIO
BRANCHES
Chicago, 144 E. Erie St. Philadelphia, 10 Vine St. New York, 44 Vesey St.

Established in 1861

THE AMERICAN

BEE JOURNAL

Oldest Bee-Paper in America

(Entered at the Post-Office at Chicago as Second-Class Mail-Matter)

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor CHICAGO, ILL., SEPTEMBER 21, 1905 Vol. XLV—No. 38

Editorial Notes and Comments

National Convention in Chicago

We have received the following from Sec. Hutchinson, of the National Bee-Keepers' Association:

THE NATIONAL CONVENTION TO BE HELD IN CHICAGO.

Ever since the breaking out of the yellow fever in the South, have I been receiving letters from different parts of the country, suggesting that the place of meeting for the National convention be changed to some Northern city. To all, for a long time, I returned the same reply: "Let's wait and see how things turn out. If the fever is crushed out of existence, or controlled, then we can go to Texas just as well as ever."

To a certain extent the fever has been controlled, but there seems to be no probability that it will be done with before the time that has been set for holding our convention in San Antonio. The time has come when we can wait no longer. If a change is to be made, it must be made at once, that bee-keepers may be planning accordingly.

Before taking up the matter with the Executive Committee, I wrote to the Directors, the editors of the leading bee-papers, and to several of the most prominent bee-keepers, asking for their views on the subject. The majority was overwhelmingly in favor of a change. The matter was then taken up with the Executive Committee, and every member favored a change to Chicago, during the Fat Stock Show the first week in December. It is possible that some other Northern city has greater claims than Chicago for the holding of the convention, but the meeting must be held where reduced railroad rates will be assured, and the Fat Stock Show furnishes these.

It is possible that there is no real danger from the fever at San Antonio, but the *fear* of it is *real*, and would have kept away the Northern people. The bee-keepers of Louisiana and Mississippi would have been shut up in their own States. Texas has had a slim crop of honey this year, and, taken all in all, a convention this fall in San Antonio would have been a pretty slim affair. I think that even the Texans themselves would rather wait another year, when, if all goes well, the convention could be held in San Antonio with every assurance of a big crowd.

Arrangements have been completed for holding the meeting in Chicago, at the Revere House, corner of Michigan and Clark Streets, on the 5th, 6th and 7th of December. This hotel can accommodate at least 300 bee-keepers, and the rates are 75 cents for a room alone, or 50 cents each where two occupy the same room. Meals are extra, or they may be secured at near-by restaurants.

W. Z. HUTCHINSON, *Sec.*

We may say that personally we regretted that it seemed best, under the circumstances, not to hold the National convention at San Antonio, as we desired very much to visit the South. But if nothing interferes no doubt the meeting can be held their next year. It is very unfortunate that it was felt the change in place should be made, but "what can't be cured must be endured." And bee-keepers are a very "enduring" class of people, and no doubt all will be glad to bow to the will of the majority who decided the matter.

But now it is "up to" Chicago to do her part in making it a great convention. It comes at the same time as the meeting of the Chicago-Northwestern Bee-Keepers' Association, so in all probability there will be a joint convention. At least the Executive Committee of the Chicago-Northwestern has made such suggestion to the National.

We hope as many bee-keepers as possible will plan to be in Chicago Dec. 5, 6 and 7. Come and help make it a good meeting.

◆

A GOOD INVESTMENT

16 2-3 Percent Interest Absolutely Safe

A Chance for Bee-Keepers Only

That sounds like one of the fake get-rich-quick schemes. When money is loaned by the thousands of dollars at 5, 4, 3 percent interest, or less, it does look as if there must be something rotten in a proposition that promises an annual rate of interest of $16\frac{2}{3}$ percent, especially when baited with the specious claim that the chance is "for bee-keepers only."

But there's nothing rotten about it. To say that bee-keepers have a chance to invest money at the rate of $16\frac{2}{3}$ percent annually, is only to put in other words the well-known fact that bee-supplies bought before Oct. 1 can be had at 10 percent discount. The object of these paragraphs is to call the attention of bee-keepers to what there is in it for them.

Let us see if we can make good.

The discount is "a chance for bee-keepers only," for others do not buy supplies of that kind. The investment is "absolutely safe," for it is just as safe to buy in September as in the following May.

Let us see about the $16\frac{2}{3}$ percent annually.

Say a bill of supplies amounting to $100 is needed. If bought before Oct. 1, $90 pays the bill. Say the purchase might be deferred till June 1. It would hardly be deferred later. From Oct. 1 to June 1 is eight months. That $90 invested before Oct. 1 practically gains $10 in that eight months, which is at the rate of $15 in a year. That $15 is $16\frac{2}{3}$ percent of $90—and there you are.

The question may be asked, "How can the manufacturers afford such a discount?" That is their lookout. Yet it is not so very hard to make a fair guess as to the answer. It is the common thing to have a very large number of orders for supplies come all in a jam in the spring, many of them after the season has fairly opened. The amount of these orders can not be foreseen, and the result is that at the last the factories must run day and night, and even then have the unpleasant experience of receiving complaints as to unfilled orders, or else have so big a stock prepared in advance as to run the risk of carrying over to the next year a heavy load of surplus stock. So the manufacturers can afford to pay a good price to stimulate early orders; and the bee-keeper who has the money has the chance to secure the $16\frac{2}{3}$ percent interest, and at the same time to avoid the unpleasant predicament of having to wait an unpleasantly long time to have his orders filled if he sends them at a time when the rush is on.

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The National and Advertising Honey

On the next page some of the leading bee-keepers mention several things that the National Bee-Keepers' Association might attempt to accomplish. While there is sufficient variety in the work mentioned, there seems to be a fair unanimity in the suggestions that favor advertising honey.

For several years we heve urged the importance of bee-keepers themselves doing something to popularize the use of honey. Not a tenth part of the honey that should be consumed on the tables of the public is now found there. In order that some definite plan might be inaugurated, several of those most interested originated The Honey-Producers' League. Its objects are all right, and its promoters made a sincere effort to get the bee-keepers and their money together in a way that, had it succeeded better, we believe would have been a great step in attaining the desired result.

But great plans and objects can not be developed and attained in a day—nor in one year. An honest attempt has been made to do just what many of the leaders say should be done, except that the League was organized to do it instead of the National Association.

Now, if it is thought that the National can better do the work undertaken by the League, and also that bee-keepers will rally to the former in larger numbers with their money, then by all means let the National at its next meeting decide to undertake the work. Let it elect an advertising committee of say three, whose duty it will be to manage this part of the work of the National. Perhaps it would be well to have a separate honey advertising fund for the committee's use, which shall be raised by an increase in dues or otherwise. The details can be worked out at the National convention, if it should decide to take up the honey-advertising subject.

It *might* be possible that the members of the League would be willing to have the dues they have paid into the League treasury turned over to such National advertising committee as mentioned. This we suggest as only a possibility, as we have no right to say that it would be done.

Of this, however, we feel reasonably certain: Something ought to be done to induce the public to eat more honey, both for the benefit of the public's health and for the financial benefit of those who produce honey. The question is, How can it best be accomplished? If The Honey-Producers' League can't do it, perhaps the National Bee-Keepers' Association can.

Which shall it be, if either of them?

◆

Split-Top Sections

Occasionally something is said in favor of sections made in halves, or at least with the top-bar in two parts. When sections were first introduced, it was common to have a saw-kerf in the top-bar to receive the foundation, but that fell into disuse when other methods of fastening were introduced. There is no denying that foundation is held very firmly when the top-bar is split entirely in two; but it is no more to be denied that the line of wax showing on the top of the finished section is always an eyesore.

Split-top sections have been used in England more than in this country; but if one can judge from the bee-papers over there, they are not growing in favor there.

Maeterlinck's "Life of the Bee."—We have a few copies of this book, price, postpaid, $1.40; or with the American Bee Journal one year—both for $2.00, as long as the books last. It is a cloth-bound book, and has 427 pages.

Some Expert Opinion

What the National Bee-Keepers' Association Should Attempt

Ques. 30—*Please name one or more of the most important things for the National Bee-Keepers' Association to attempt to accomplish.*

S. T. Pettit (Ont.)—Can not do it.

Dr. C. C. Miller (Ill.)—Advertising honey.

C. Davenport (Minn.)—To bring before the public the value of honey as a food.

Dr. J. P. H. Brown (Ga.)—To secure better prices, better freight-rates, and less adulteration.

Mrs. J. M. Null (Mo.)—Advertise honey as though the people had never heard of such a thing before.

R. L. Taylor (Mich.)—An effective plan to secure a more general distribution and consumption of honey.

E. E. Hasty (Ohio)—I have my doubts about most of the new schemes—let them hold fast what they have already gained.

Morgan Bros. (S. Dak.)—1. The suppression of the adulteration of honey. 2. Aiding its members in the sale of their products.

O. O. Poppleton (Fla.)—Keep on doing what it has done, for one thing. Fight the adulteration of honey at every opportunity.

L. Stachelhausen (Tex.)—Fighting the adulteration of honey and the public prejudice against honey. Getting a better market for honey.

J. M. Hambaugh (Calif.)—Destroy the sale of adulterated honey. Overcome public prejudice against honey. Educate the people to use pure honey.

E. Whitcomb (Nebr.)—Pure-food laws by National legislation; and a National law which will work uniformly to stamp out foul brood in the different States.

Rev. M. Mahin (Ind.)—The most important is the suppression of honey adulteration. Next to that, if indeed it should not be placed first, is the eradication of bee-diseases.

Adrian Getaz (Tenn.)—Fight the adulteration of honey. Get appropriations from the Government to carry on apicultural experiments in our agricultural institutions.

N. E. France (Wis.)—Advertise honey and its uses. Help to market honey for members. Less defense in neighbors' quarrels. Better methods for nominating candidates for offices.

Eugene Secor (Iowa)—Advertise the value of honey as a food. Keep before the people the fact that bees are not an injury to flowers or fruit. Assist in procuring and enforcing pure-food laws.

Jas. A. Stone (Ill.)—The teaching of the general public how few blossoms bear fruit unless pollenized by bees or other insects. And the uselessness of spraying fruit-trees while in bloom.

Wm. McEvoy (Ont.)—To get the bee-keepers to leave the honey with the bees until it is well ripened before they extract it, so that they will be able to sell the public a much better quality of extracted honey.

C. P. Dadant (Ill.)—Do away with the story of manufactured comb honey as far as possible by proper advertising; this is the most important matter to bee-keepers to-day. But there are thousands of other things to do.

J. A. Green (Colo.)—Increase the honey market by educating the people in the use of honey; teach them not to fear the adulteration that does not exist; and check, and, if possible, do away with the adulteration that does exist.

Prof. A. J. Cook (Calif.)—A national association for marketing, or a national organization like the Southern California Fruit Exchange. I believe this can be accomplished, and it would be of tremendous value to all bee-keepers.

E. D. Townsend (Mich.)—Michigan has a law prohibiting the word "honey" being used except on packages containing *pure* honey. Help other States to get a similar law, then help put the law in force. I think there is *no impure honey* on the market in this State.

C. H. Dibbern (Ill.)—1. Stop the sale of all glucose syrup as honey. 2. Run down every lie as to comb honey being "manufactured" and extensively sold. 3. Advertise honey as being far ahead of all sugars and syrups as a wholesome article of food.

G. W. Demaree (Ky.)—Let the National Bee-Keepers' Association take steps to enlighten the general public, and disabuse their minds of the past and present delusion that bee-culture is necessarily a "little business," and much will be accomplished by its efforts.

R. C. Aikin (Colo.)—Unite all into a co-operative association. Intelligent, united action in distributing products and buying supplies carries with it many other things; eliminates competition, unifies packing, cuts out extra expense, and gives confidence. The United States of America is a "great combine." Who would chop it to pieces, or have 5 or 10 concerns to deliver a letter from ocean to ocean? See?

E. S. Lovesy (Utah)—A more thorough organization. It is needed all along the line. The bee-keepers of every State should be organized so as to be in touch with the National. The whole should be organized to such extent that estimates could be made as to the extent of the entire honey crop, its value, also where and when to market the product. Sugar-men do this, and why not the bee-keepers? "In union there is strength."

P. H. Elwood (N. Y.)—1. To protect the bee-keeper from unjust ordinances, etc. 2. To prevent the sale of adulterated honey. 3. To educate the people to eat more honey, and shun the vile, unhealthy glucose compounds offered under various names. I once bought a can of the best obtainable brand of glucose, and offered it to the bees. They took only a limited quantity and died before spring. I do not believe it possible to winter a colony of bees on pure commercial glucose. Grape-sugar is the natural food of the honey-bee. Then why do they not assimilate the grape-sugar of glucose equally as well as that of honey?

Depth of Shipping-Cases

Shipping-cases for comb-honey ought to be a little deeper than the height of the sections, when they are piled up a dozen or more high, then the weight of nearly the whole pile will not rest upon the honey in the lowest case, which, in some cases, causes a leak. Mr. Irving Kinyon writes me that he got this hint from P. H. Elwood.—Bee Keepers' Review.

◆

Comb Honey Guarantee Circulars.—These were gotten up by The Honey-Producers' League, to be put into shipping-cases before nailing them up for market. They are mailed for only 10 cents for 50—practically cost price. Every bee-keeper who has any honey to sell by the case should use these circulars. They will help to inspire confidence in the genuineness of comb honey. Send all orders to this office.

Miscellaneous News Items

"What To Eat" is a monthly magazine devoted to the preaching of the gospel of pure food. It is published here in Chicago, by The Pierce Publishing Company. In the September number we are glad to notice the major portion of the Daily News article on "Comb Honey Not Machine-Made." We still have some typewritten copies of it that we will mail on receipt of a 2-cent stamp, for the purpose of having it published in local newspapers. Almost any bee-keeper can get the editor of such paper to use it, we think, if the request is properly made.

◆

Wrong Statements About Bees are constantly appearing in the newspaper press. Lisle J. Schneider, of Delaware Co., Iowa, sends us such clipping, and says he sees about 25 papers, and scarcely a week passes without meeting with some "break" about bees in them. Of course we can't copy all such wrong statements in these columns, and it would do no good if we could do so. What is needed is their correction in the very papers where the original misstatements appeared. Every bee-keeper who sees such misleading reading matter referring to bees or honey should very promptly write the editor a respectful correction, or something that gives the truth about it, and request its publication. If the bee-keeper himself does not do this, certainly no one else will do it for him.

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The Apiary of J. P. Blunk, of Webster Co., Iowa, is shown on the first page this week. Here is what he wrote us when sending the photograph, Aug. 8:

I send a picture of a part of my apiary. The grove is so dense that it is a hard thing to get a good picture.

The two outside rows are the hives of the colonies that swarmed. It will be noticed that they are well scattered. This I did to insure the safe return of young queens when on their wedding-trip. It proved my former statement, that young queens miss their own hives when they are placed close together, and are not killed by king-birds, as many believe. I got every young queen back to her own hive, not one being lost.

This grove is a fine place for bees in hot weather, but a poor place the forepart of the season—too cold—so I put the hives out in the sun up to about swarming time, then I move them backwards by degrees until I get them all in the grove.

Those are my boys at the further end of the apiary, and all are afraid of bees except Dan, the small one at the right of the tall hive. He is my helper in the apiary. I tell them it's no wonder they are all bachelors, for any one who is afraid of a bee surely could not muster up courage to get a wife. So you see I have a poor prospect of ever being called "grandad."

About half of the colonies swarmed, all swarms being regular and in order; no foolishness with the swarms this season.

J. P. BLUNK.

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Comb Honey Not Machine-Made.—We have a fair supply of the typewritten letter on this subject, which appeared in the Chicago Daily News of June 21, 1905. It is just the thing to have published in every bee-keeper's local newspaper. We mail it for a 2-cent stamp. Better order several copies, and request as many newspaper editors to publish it. It will certainly be a good thing for both the reading public and the bee-keepers.

Contributed Special Articles

How Much a Bee Gathers—Strong Colonies

BY G. M. DOOLITTLE

A CORRESPONDENT writes me saying, "Will you please tell us through the columns of the American Bee Journal whether the advice which is given me (to keep my colonies *always* strong) is good?"

If every bee reared could have a field of honey placed before it in which to labor, then the motto, "Keep colonies always strong," would be the right one; but inasmuch as this can not be, and as bees at all times must be consumers, no matter whether producing or not, I can not see the philosophy of having a colony strong in bees at such seasons, when of necessity they can be only consumers. That one bee can not gather 50 pounds of honey, nor one-fiftieth part of that, is one of the reasons that more than one bee is required in a hive; and because one bee can not gather that amount is the reason that the apiarist desires a large number of bees in his hives at certain seasons of the year; and as a large number is desired at certain seasons, some have conceived the idea that a large number of bees in a hive at *all* times of the year is a thing of great value.

But right here comes in another side to this "gathering" question. I have just said that one bee could not gather one-fiftieth part of 50 pounds of honey, my reason for so saying being that in this locality we do not have a yield of honey lasting through the length of life allotted to an individual bee, while many bees—yea, usually more than half that are reared under the most skillful management—never add an ounce to the surplus.

Thus, right here comes in another factor to this question, which is the field, or supply of honey. In reality we must begin with the field, or, in other words, place that *first*, for without the field or honey-flow we have no use for the bees. With a continuous and uninterrupted honey-flow within three miles of the hive during the time which a bee lives, I think that a bee might easily gather one ounce of nectar, which would take only 800 bees to gather 50 pounds. Of this amount it would take at least 12 pounds to supply the wants of the colony during the time the bee was living, and unless the nectar was thicker than it averages here, it would take three pounds of this nectar to make one pound of honey. So, then, we would have from 12 to 13 pounds of actual honey as the product of 800 bees during their life, over and above what was consumed by the colony with an uninterrupted flow of nectar.

While this might be possible, yet there are two things which make it improbable, the first being, as already stated, that the honey-flow does not continue long enough, and the second, that the yield would not be sufficient within three miles of the apiary, where many colonies are kept, so that the bees could work to the best advantage. To illustrate:

One year I had a colony which, on May 25, I estimated to contain 4000 bees. This estimate was made by counting the bees on a given surface of the comb, and then dividing the amount of comb covered with bees by the space counted, when the quotient was multiplied by the number of bees counted on the first surface. The next day was a fine one, and apple-trees were yielding nectar as well as I ever knew them. At 7 a.m. the bees began to go to work, and at 8 a.m. I found that on an average 60 loaded bees were going into the hive each minute. One incoming bee was caused to disgorge the contents of its honey-sac, and a fair-sized drop of nectar was the result. By a careful estimate I found that it would take 3600 such bee-loads to make one pound, so I concluded that 4000 bees were good for the gathering of one pound of nectar per hour, besides caring for the interior of the hive.

Before a bee had left the hive in the morning, I had weighed the same so that I could tell when night came how much the colony had gained. They worked right along at the average rate of 60 bees per minute till 4 p.m., when there came a gradual slackening until 5, when all were in on account of a wind-storm coming up.

At dusk that night I weighed the hive again, thinking to myself as I did so, that if my estimate was correct, it should weigh 8 pounds more than it did in the morning. I found it weighed 8 pounds and 9 ounces, thus showing that my estimate was not far out of the way.

But what was a great surprise to me, was that when weighed the next morning I found that 8 pounds and 9 ounces gain had gone down to 3¾ pounds, thus showing that the nectar fresh from the flowers was not all honey, by any means.

After this I became infatuated with the idea that there could be as much honey obtained from apple-bloom as from basswood, if I could only get the population of the hive up to 40,000 instead of 4000; so I began trying to get my colonies strong in bees early in the spring, but after an entire failure of apple honey for the next 4 years—on account of the cold, rainy weather which is usually on when these trees are in bloom—I gave the matter up, only trying to get the colonies strong so as to take advantage of the generally good weather we have during the clover and basswood bloom.

The point I wish to impress on the reader is: First, we have the field or location we are in, of which we should have a thorough knowledge; next, we have the bees to get in large numbers *just in time* to take advantage of the main honey-flow of the field; and, third, a bee is of little value as a *honey-gatherer, only* as it can be placed in the field of *action* just in the right time. In this way the quantity of nectar which a bee can gather in a lifetime becomes of interest to us, that we may work faithfully and intelligently to have that *lifetime* come when our field is yielding nectar. At all other times we are wise not to work for bees in a greater number than is sufficient so that we can take advantage of their numbers to bring the colony up to this "high water" mark, with the rolling around of the honey-flow of each season.

Onondaga Co., N. Y.

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A Top and Bottom Frame-Spacer

BY C. W. DAYTON

I HAVE mailed to the office of the American Bee Journal a top and bottom spacer as I use in my hives—the spacer described on page 541. I put them in my hives in 1895. I expect to make 300 new hives between now and another season, using this spacer.

The wire for the bottom is simply woven about headless nails driven in proper positions into a piece of hard wood, and then soldered to the strip of galvanized iron before it is slipped off the nails.

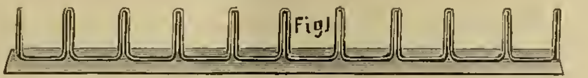
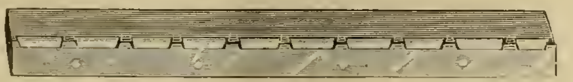


Fig 1

The top or end spacer is marked out of galvanized iron from a pattern, snipped with the tinner's shears, and then bent over in a vise having wide jaws. I made a stamping die to cut the notches, but it left the edges too sharp, and, besides, it is so short a job that it is impractical to construct a machine.

Fig 2



Although I never have seen a "St Joe" hive or spacer, I suspect these notches, when ¼ inch deep, are exactly like it. But my notches are only ⅛ inch deep instead of ¼ inch. And bent over instead of being cut out. The only need for deep notches is in moving. When a wagon runs upon a considerable-sized stone, and then slips suddenly off one side, or the stone is a loose one and rolls over, the ends of the frames are apt to jump out of the shallow notches unless bee-glue holds them in place.

Another thing, there should be a half-inch space or more between the side frame and the side-wall of the hive. Mr. Abbott wrote me that wire would not work as a bottom spacer. I would like to know what he uses that is better than wire.

The strips of wood on the top spacer sample are the sequoia (big tree) redwood, which shrinks and swells endwise, never warping or checking sidewise. My hives, constructed of this ⅞-lumber, 1½-story, full of frames, bottom-board, cover and shade-board, average about 16 pounds in weight. I am not well pleased with it. It is too soft, and fades to almost black. It is not so pleasant to look at as white, clean pine.

Los Angeles Co., Calif.

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Sulphur Treatment of Bee-Paralysis

BY H. S. PHILBROOK

I SEEM to have made a valuable discovery in regard to bee-paralysis, which might well be called the O. O. Poppleton plan modified.

I had moved my bees to the hills, had succeeded in building up most colonies to famous strength, and was just glorying in my prospect of an immense yield of sage honey, when the bees began to show unmistakable signs of bee-paralysis. It first appeared in one colony, and I immediately closed it at evening, and moved it 2 miles away, but it soon broke out nearly all over the yard. Out of 153 colonies 53 were affected. I was not discouraged, but was ready to fight it, but the question was how to proceed. I disliked the Poppleton plan on account of destroying the brood or else cutting strong colonies up by forming nuclei for the brood. So I tried various other remedies, among the rest a spray of sulphuric acid diluted, which was very effectual, but also had the bad effects of ruining the unsealed brood. Some colonies were so badly affected that they would carry out a full quart of dead bees in a single night.

I reasoned that the disease was a microbe or germ disease, and it must enter the hive at the entrance. If the Poppleton plan worked, sulphur was death to the germ or microbe. I wondered if it were necessary to cover the brood with sulphur, for it does not attack the brood, but only the old or adult bees, and especially the queens. I reasoned that the diseased bees being the adult ones, by covering the entrance-boards with the sulphur and throwing it well back into the hive, the adult bees would come very much in contact with it in trying to keep it up, as the disease seemed to attack them on the tongue, and thence enter their bodies. So I treated every colony in the apiary to a dose of sulphur by throwing it well into the hive-entrance in the evening when all bees were in.

At first the results scared me, for the quantities of dead bees increased, and I drove a distance of 50 miles to Mr. M. H. Mendleson's, to see if he might not suggest a remedy. But my only consolation was this: "Philbrook, you are in a bad fix just at the beginning of the honey-flow, and you will get no honey this year. You have my sympathy, but I can not help you, except to give you my salt-and-water recipe, and it will take the entire season to get it out of your bees."

I was somewhat discouraged, and drove home wondering what I should do, when, presto, change! there were scarcely any dead bees carried out the next morning, and after 4 days I treated the entire yard to another dose of sulphur, and very few dead bees appeared. My yard was free from disease, and all so quickly and easily that it seemed that I had only had a horrid nightmare, and not the real thing.

It appeared later in the season, but I promptly dosed with sulphur, when it vanished once more, and I have seen no further signs of it. My honey crop amounted to a trifle over 15 tons from those 153 colonies.

My first experience in the bee-business was in my father's apiary in the Simi Valley, in California, in 1879. He was in the business for 10 years, and one year took off 47 tons of extracted honey. He shipped this crop to Chicago, New York and Boston, but the experiment proved very disastrous, although he went with it and carried samples in the comb. But people would believe that he had the means of putting it in the combs and sealing it over artificially, thus practicing adulteration

Ventura Co., Calif., Aug. 20.

Convention Proceedings

Report of the Chicago-Northwestern Bee-Keepers' Convention, held at Chicago, Ill., Nov. 30 and Dec. 1, 1904

(Continued from page 649)

SECOND DAY—MORNING SESSION.

At 9:50 a. m. Pres. York called the convention to order and requested Dr. Miller to invoke the divine blessing.

Dr. Miller—Our Father, we thank Thee for another night's rest. Prepare us for the work of the day. We pray Thee that the same kind feelings, and the same kind spirit, may prevail here to-day as did on the past day. We thank Thee for the acquaintances of the other bee-keepers, and that we may meet together in a kindly spirit and discuss the things in which we are mutually interested. We pray, O God, for Thy blessing upon us. Wilt Thou care for the dear ones at our respective homes. May we feel that they are safe under Thy care. We pray that Thy blessing may be upon us as bee-keepers, and may we learn something to-day. May we go from here better men and women; better fitted to do the work that our Heavenly Father has for us to do here upon the earth. Bless the President and the other officers. May the President have just the wisdom he ought to have to direct aright the proceedings of this convention. We pray that Thou wilt bless all the members. Lead us in all we do. Lead us, we pray Thee, through life; lead us up to the time when we shall leave all the things of this world, and may we unitedly come up to enjoy the life beyond through all eternity. We ask it in Christ's name. Amen.

REPORT OF THE INSPECTOR OF APIARIES.

We will call upon Mr. Smith, the State Inspector of Illinois, to open this subject, and tell us about his work.

Mr. Smith—Really, I do not believe that I can add to what has already been so often told the bee-keepers by Mr. France, and by Mr. Moore here in his remarks yesterday. However, I will give an outline of what I have done the past year. The way I do my work is by going to places from which I get invitations to come. I don't go out and hunt up foul brood, only in the neighborhood where I find foul brood; we as a rule go around to the adjoining neighbors that have bees and inspect them. During the last season I visited thirty-two counties in this State, just about one-third of the counties, probably—it would be a good one-third with Mr. Moore's work in Cook County. I find that the bee-keepers are very anxious to know all about foul brood, and how to treat it, and they are very apt to learn also. They are very anxious to inform other bee-keepers how to treat it. Of course there is only one way that I treat foul brood and that is to destroy the comb. I don't try formaldehyde or any other disinfectant; I remove the bees and destroy the comb — that is, the brood-combs. I cleanse the hives out and re-hive the bees again on foundation or empty frames. I think that the work is in fair progress, and another year or two will show that the work that has been commenced will bear good fruit. The diseased locations are found mostly in the north part of the State and along the Mississippi River in the north and south parts of the State, also along the Indiana line. I found foul brood in only one county in the central part of the State. Of course there may be foul brood in every county in the State so far as I know, but I think the bee-keepers, as a rule, are reading up, and that is one way we ought to work—through the press, and the mail, and educate the bee-keepers so that they can take care of their own bees. The bee-keepers as a rule, are very anxious to have the Inspector come, and they are very pleasant people to be with. In fact, I believe that the bee-keepers are intelligent and progressive, and are very friendly. There doesn't seem to be any jealousy existing among them, that one is afraid that his neighbor will produce more honey than he does, or that his bees will do better than his neighbors', but they seem to be anxious to work together. I think that is a very good idea, also. Now if there are any questions that any of the members wish to ask I will be glad to tell them anything they want to know, that they do not know.

Dr. Miller—You say that you destroy the comb and put the bees upon foundation or empty frames. Is that all? Do you let them stay?

Mr. Smith—No, in about two weeks or ten days remove them and put them on full sheets of foundation, after they have exhausted the honey they carried with them from infected colonies.

Dr. Miller—Isn't two weeks longer than has been the custom?

Mr. Smith—That is long enough. Some I have given as short a time as four or five days, but I think the best plan is to be sure that the honey is all exhausted; and if it is in a time when there is no honey-flow the bees want to be fed.

Mr. Kimmey—How about the young that have been started in two weeks, or would they start?

Mr. Smith—You cut that comb out and melt it up into wax.

Mr. Kimmey—Suppose that the disease is carried by the honey that the bees have at the time they make the first change, won't the disease go on with the next brood?

Mr. Smith—You will find very little brood in the new comb. Of course it would be in the very young larval stage. The disease never attacks the young bees until they get in the state called the grub state. After the bees become in the nymph state the disease never attacks them. I have never found any that were killed after taking the form of the nymph, with legs and wings.

Mr. Kimmey—Before that time won't the bees that have become infected with the honey carry that infection to the brood that is started in two weeks?

Mr. Smith—I think not. I don't think that the disease can be developed in two weeks. At least I have never found any disease. I have had some parties that didn't change their bees back into the second frames until they had capped brood, and I found no disease there.

Mr. Kimmey—Won't it then be better to put them on empty frames the first time?

Mr. Smith—I think it would, because it has a tendency for them to exhaust their honey in building new comb.

Mr. Kimmey—And afterwards destroy them and put them on full foundation.

Mr. Smith—Put them on full foundation the second change.

Pres. York—I would like to ask in how many apiaries Mr. Smith found disease, and what percent he visited?

Mr. Smith—The percent I visited was probably 90.

Pres. York—Do you know how many apiaries you visited?

Mr. Smith—I have a record of that, but I didn't bring it with me.

Pres. York—How many colonies did you examine?

Mr. Smith—Over 2,000.

Mr. Swift—Is the disease exterminated by melting the wax? Does heat destroy it?

Mr. Smith—Yes. Mr. Dadant can tell that. He gets thousands of pounds of wax sent in, extracted from diseased colonies, and he has never had any complaint against it.

Mr. Pease—Will you give us a plan by which the person who never saw foul brood will recognize it?

Mr. Smith—Did you ever smell a carpenter's glue-pot? It puts me in mind of the young man who went to the medical college. When he returned home they wanted to know all about it. He says, "Now I will tell you, If you had seen what I have seen, and felt what I have felt, and smelt what I have smelt, you would know all about it." [Laughter.] If you smell that foul brood once you will never forget it It smells as nearly like a carpenter's glue-pot as anything you can get.

Mr. Wilcox—Don't you find foul brood sometimes without smell?

Mr. Smith—Where it is not fully developed all over the hive and it is just the first inoculation, you may sometimes find a comb of beautifully sealed brood and just three or four cells that are affected, but it doesn't take long for it to spread.

Mr. Wheeler—I would like to go back a little bit. In regard to this treatment that you speak of, the bees are first shaken out at the beginning of the honey-flow, or "shook out," and they are put on empty frames. Our bees gathered the whole year's crop in two weeks' time. Now, there is a very tender point right there, whether you leave those bees in the hive two weeks and then take them off those combs they have built in those two weeks and melt those combs up. If it is not necessary to do that it would be a great loss of money to the bee-keeper. If two days or 48 hours would do, that would be a great deal better than two weeks.

Mr. Smith—Two days or 48 hours would not suffice—four days at least. I wouldn't make the change under that time. While it is a fact that they do not always carry the disease with them—I have known swarms to come out of the infected hives, and I have hived them on foundation and they didn't carry the disease with them at all. It seems they exhaust the honey before the young brood gets large enough to take the disease; especially if it is a second swarm and the young queen doesn't get to laying for a few days, the brood is later than the laying queen would be.

Mr. Wheeler—Some of the money that is used ought to be used to experiment along that line. It makes a great difference to us bee-keepers, if we know just how much time there should be. I have had a little experience, and I have shaken them out on combs, that is, just one comb with a little brood in and fresh-laid eggs, and those bees showed no signs of the disease for a year or two, no more than bees shaken out on empty frames; why that was I can't tell. They were no more affected than bees that were shaken out on empty combs and given new comb. The object was to save all the bees possible.

Mr. Smith—In making my trips I cannot go back to every man's yards in four or five days afterward and change his bees, I only leave my orders with him. I have gone back on several occasions where my trip was near there, and found some of them had not transferred them at all. They got busy, it was haying time, and the oats had to be hauled in, and with one thing and another they didn't have time, and they didn't like to bother with them; they were afraid of being stung, and they didn't transfer them back at all.

(Continued next week.)

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

The Honey-Eaters' League.

Yes, "Illinois," hurrah for the Honey-Eaters' League to keep the Honey-Producers' League straight, and to see to it that honey, genuine but poor, is duly fed out to the bees, and not eaten by man. Page 537.

No Harm to Eat Wax in Honey.

Dr. Bohrer says some good things on page 538; but I can't second his advice to fritter away advertising to tell the public that wax is not digestible. Though not digestible it doesn't do a bit of harm—and is suitable for the eating even of a risen Christ. Bran is on the borders of indigestibility, and yet most doctors would like us to have it left in our food instead of bolted out. And bran is capable of irritating some delicate stomachs, as wax seems not to be.

Stacking Up Sections of Honey for Further Ripening.

So Doolittle, in stacking sections, puts strips between the courses to help the intercirculation of air. Undoubtedly good—and not so much trouble as it looks to be, after one has once gotten the strips. With some persons the strips would be spoiled, or half spoiled, when wanted for a second using; but probably those persons would better do something else than keep bees. Page 539.

Bees Superseding Queens.

And here's a good idea of C. P. Dadant's: If a queen is very prolific the workers will quickly notice it when she begins to fail, and rear another to supersede her. But if she has been a poor one all her life they may not pay attention when she becomes somewhat poorer. Page 540.

Color of Hair and a Day's Work.

Is that strange assertion a fact, Dr. Miller? Can't tell by the color of a man's hair how big a day's work he can do? Say, now, I'm quite sure I could do a bigger day's work before my hair got to be *white*. Page 543.

"Honey-Butter."

So "honey-butter" is what it is, eh? I think that is a very good name for it—if it takes. Likely to make some people think it is a *mixture* of honey with something else—but I don't know as the error is likely to do any great harm. Page 547.

Managing a Balled Queen.

Excepting the folks "born with a silver spoon in the mouth" we mostly don't have a tablespoon at hand to use when we suddenly find a queen in jeopardy in a ball of angry bees. I should rather suggest a couple of chips or section-sides to lift the ball with. And I should say, Don't risk your bare hand. Dumping the ball into water seems to be the standard way. Alas, water is very often not at hand. Thanks to Dr. Miller for the information that *very careful* smoking with cool smoke does not endanger the queen much more than water does. It's a dire situation, and one must not expect to save her every time by any tactics. Page 549.

Don't Extract Honey from Combs with Brood.

From the Northwestern folks I would have liked to see a little more square-up-and-down condemnation of the abominable practice of extracting honey from combs with brood in them. The general drift was against it—but we don't want to *drift* against cannibalism and such things if we find them still extant. Page 552.

Do Bees Move Eggs?

Evidence of bees carrying eggs from one place to another is of interest (if we could get it), but to find an egg in a queen-cell above an excluder is hardly positive evidence. More likely that a laying worker did it. Laying workers are not to be expected in a super where a queen is laying below, but there *might* be an exception. When an egg is being layed in sticks automatically wherever it is touched against the cell. But to make it stick in a new place after it gets dry once—that's a rub that I guess bees never overcome. To move the minute larva after the egg hatches is easier—and the evidence is more plenty that they occasionally do it. Page 555.

Mailing Laying Queens.

I would offer this improvement on the preparation of a heavy and long laying queen for journey by mail. First make a nucleus of the frame she is found on, and keep her there for a day or two. Then put the nucleus back where it came from and cage the queen. Keep her 24 hours and then send. This will be *gradual* cessation of laying. It may be that sudden cessation is capable of doing some harm without any jolting. Page 565.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Not All the Sections Needed

When Mr. York was at Marengo, July 4, he thought the whole of the 26,000 sections might be needed; not that all would be filled, for always more sections are put on than are filled. But the bees balked 2 or 3 weeks later, leaving a big lot of sections that were never put on the hives. Fuller report later.

Outwitting Sneak-Thief Boys with Bee-Hives

Dear Miss Wilson:—I have read so many interesting reports and experiences, and had a number of great helps through the American Bee Journal and you, that it really seems as if you and I were acquainted. However, I scarcely think we would recognize each other on the street should we happen to meet, do you?

This time I am not going to ask any questions, but have had several experiences that I thought possibly you might like to hear.

We live in the heart of the best residence district of a city of about 105,000 people. We have the largest grounds around, with one exception, and the place has a great deal of fruit of all kinds on it, especially apples. It has been the conundrum of years to keep boys away from apple-trees in the city. Nearly every one has given up in despair, and let the boys have the apples to save the annoyance and bother of being up at 3 a.m. and keeping an uninterrupted vigil all day, only to get up the next morning and find some one has harvested your fruit before you arose by the light of the moon.

We tried keeping a bulldog, and various other ways to save the fruit. But the dog was poisoned, and the other ways proved worthless after a trial. All at once one day my eye came upon an article about bees, in the newspaper, and being always interested in bees through being so fond of the honey, I read the article. It was on the habits of bees, and other things that to a bee-keeper are so common. But being an uninitiated one at that time the article looked so wonderful that, on thinking it over, the thought occurred to me, Why would not the bees keep away the troublesome boys? That was the beginning, in the late summer of 1903. I sent for "A B C of Bee Culture," and studied all winter, and engaged bees for the spring.

The result is we have not been bothered at all with boys since one small crowd of boys meddled with the hives by throwing apples at them and were stung. One boy tells all the rest, and they "stay off." I wonder if any one else has ever kept bees for this purpose, and if they have been as successful.

Only yesterday the boys were attempting to steal the ripe peaches from our finest tree. It is loaded with fine fruit, and away from the bees somewhat. I had a couple of empty hives, and we set those empty hives right under the peach-tree, with harmless but *good* results. For our own home, at least, I seemingly have solved the extremely hard *boy* problem to my satisfaction.

I have a colony under each tree of the choicest fruit, and the common fear and terror of bees makes other people (as well as boys) keep a safe distance away.

Since keeping bees the last 2 summers, and finding out some of their habits, and the ways to handle them, I often wonder why so many people are so mortally afraid of bees that they can not go into a most pleasant and profitable (after learning the ins and outs) business.

I am a young business woman, and bees and music are my only recreations. My music I study early in the morning, and my bees every evening when I get home from the office.

I also had the experience of catching a strange (the first one I ever handled alone) swarm of bees last summer They were hanging from a limb of an oak-tree about 10 feet from the ground. I have the bees still. All the neighbors (for it is thickly settled around us) were so terrified at the swarm of bees they dared not open the screen door, and sent for the street inspector to remove them. He came and "dared not do it," and went away. For 2 days this swarm hung before I found it out. I was out in the garden when a passing teamster told me about the swarm of bees, and seeing the hives asked if they were mine. I told him they were not.

"You can get that swarm if you know how," he said.

I told him I did not want to steal even a swarm of bees.

"You need not be afraid. The whole neighborhood is scared to death, and willing to pay to have them removed."

So I went over, with the above result. I found out about the inspector after capturing the bees, and he was greatly relieved, as he "dast not," and could not, or did not care to find any one who "dast." I had lots of fun and an experience that don't come often to one who has always lived in a city.

Last year was a very poor honey-year, and this year worse yet. There were quantities of clover blossoms, but so much rain and such cold weather the bees could not work. I think I will average about 25 pounds of honey per colony, and considering the weather and my inexperience, coupled with having to transfer 3 out of 5 colonies last spring, I have done as well as I could expect for one who makes bee-keeping a secondary occupation. And I have had all kinds of good times among them, and many a good laugh, as people that knew nothing of bees made a remark or asked questions.

The American Bee Journal is a paper which is as necessary in bee-keeping as a dishpan to housekeeping. I have been on the point of bothering you several times, and I'd say to myself, "I'll wait till the Journal comes, and perhaps I can help myself out," and, sure enough, the very thing I'd want, and at the time I'd want it, would be in the very next paper.

I have laughed at some of my remarks in a previous letter printed in the Journal, and torn to pieces in a good-natured way by some critic, and really I am learning lots, and thank you very much. MISS MICHIGAN.

It took a woman's wit to solve the sneak-thief question. I want to congratulate you on your success. It was a very bright idea, putting those empty hives under your luscious peach-tree. I could just see those boys skulking away from the empty hives, and you enjoying the sport; but it would be hardly advisable to publish in the local papers that said hives contained nothing but emptiness!

Honey Tooth-Paste

Four ounces of precipitated chalk, 2 ounces of powdered castile soap, 2 ounces of powdered orris root, 20 drops of oil of sassafras, 40 drops of oil of bay, sufficient honey to form into a paste.—MME. QUI VIVE, in Chicago Record-Herald.

Honey in the Heart of London

Over 50 pounds of comb honey of excellent quality have recently been gathered in the very heart of London. The bees belonged to a woman apiarist.—The Farmers' Review.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to DR. C. C. MILLER, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Remedy for Bee-Moth

Is there no preventive against what is known as the bee-moth? Out of 20 strong colonies we have had 4 literally ruined by this infamous pest. It appears that when the moth gets into a hive the bees give up to their fate, which very soon is entire destruction. If there is a remedy why not publish it in every bee-paper in the land? MISSOURI.

ANSWER.—Every bee-paper in the land has repeatedly published the remedy, and it may also be found in the text-books. In a word, the remedy is strong colonies and Italian blood.

It is hardly the right thing to say that the moth overcomes a colony; rather, the moth comes in to finish up the work when a colony has given up. No one ever heard of a strong colony of Italian bees with a good laying queen being overcome by the wax-moth. True, the wax-moth may get in some of its work, but the bees of such a colony will always keep the upper hand without any interference on the part of the bee-keeper. Don't allow weak colonies; don't allow queenless colonies. Even a very weak colony, however, will keep the moth at bay, if the bees be of Italian blood and have a good queen.

The "Stinging-Bug" and Bees

I am sending you a new enemy of the honey-bees. These bugs stay right among the blossoms of sweet clover, and when a honey-bee alights on it in quest of nectar they will fasten their front feet or claws to the honey-bee's leg and about the stem of the blossom, holding the bee fast, and rob it of its nectar, as all bees have had their tongues out when I have found them dead, with one or two of these bugs holding fast to them. What are the bugs? Will they be a source of annoyance, that is, if they become very plentiful? ILLINOIS.

ANSWER.—The culprit is Phymata erosa, which you will find described in Cook's Manual, where Prof. Cook says: "I have received it from Maryland to Missouri on the South, and from Michigan to Minnesota on the North. The insect will lie concealed among the flowers, and upon occasion will grasp a bee, hold it off at arm's length, and suck out its blood and life.... It is also called the 'stinging-bug,' in reference to its habit of repelling intrusion by a painful thrust with its sharp, strong beak."

It is about ⅜ of an inch long, looking a good bit like a squash-bug on a small scale, a special characteristic being its very heavy, awkward-looking front legs, which are, however, admirably adapted to seize and hold its prey. It is not wholly bad, for it destroys caterpillars and other vegetable-feeding insects. Although known for many years, it has never seemed to become a very importan foe, which is fortunate, as it would be a hope less task to try to conquer it.

Queer Experience in Introducing Queens

I took the old queen from colony No. 1 Friday morning, Aug. 11, and put in a cage and queen on Saturday, the 12th. I took the old queen from colony No. 2 on Monday, the 14th, and put in a cage and queen the same evening, about 5:30. On the same day colony No. 1 swarmed out and united with colony No. 2 without much fighting. What became of queen No. 1, and why did the bees swarm out and unite with No. 2? I am sure No. 1 was dequeened, and, further, they came clear across the whole row of hives. I have introduced a great many queens, but never before had such an experience. KANSAS.

ANSWER.—Bees are queer critters, and there's no telling why they do some things. In the present case, No. 1 may have swarmed because in proper condition for swarming, for when a colony has the swarming fever the change of queens doesn't count. But why the swarm should enter No. 2 I don't know—possibly because there was some excitement there caused by the introducing. I have known cases where a swarm has issued and after some delay has entered a hive other than its own. As to what became of the queen of No. 1, it very likely went with the swarm and entered No. 2

Questions on Management

I have in my apiary 4 colonies of bees which have made me much trouble. I shall call them Nos. 1, 2, 3 and 4.

No. 1 had a queen that was not a good one. The bees dwindled away until the colony became very weak. The first part of August I introduced a new queen, which was accepted, but the young queen was not much better.

Colony No. 2 was queenless. I introduced a queen that was killed; later I united No. 2 with No. 1. But still No. 1 remains weak.

To No. 3, which was a strong colony, after removing the old queen, I introduced a young queen, which was killed in the cage and thrown out. I then introduced a second queen which, I believe, was accepted. The bees are very cross.

Colony No. 4, which was also queenless, was strong with eggs and brood in many cells of all stages. I thought the eggs were laid by a worker-bee. I therefore took the colony about 50 rods away from the old stand, and brushed all the bees from the combs in the grass, before introducing the young queen, but the bees did not accept the queen. The colony is medium strong, and still has some brood, but the wax-worm took possession of it. This was one of my best colonies.

1. Why did not colony No. 1 improve after uniting with No. 2?

2. What was the reason No. 3 killed the queen first introduced? and what makes them so very cross?

3. Did I do right in uniting No. 2 with No. 1?

4. How can I save colony No. 4, or how can I improve No. 1? Should I unite, or should I put in a frame of all kinds of brood from a strong colony? PENNSYLVANIA.

ANSWERS.—1. Old age of the bees was probably the basic trouble with No. 1 at the last. Its two queens being poor, there was little addition to the strength of the colony, and the young bees were dying off faster than the young bees were coming on. Colony No. 2 was added to it but No. 2 had been queenless for some time, and its bees were getting old, so that they died off in a short time, leaving the colony no stronger than before. Indeed, it is possible that some of the bees of No. 2 may have returned to some colony near its old place, so that there was little help from No. 2 even at the time of uniting. It would have helped more to build up the colony if you had given it frames of very young brood from other colonies. It does not weaken a strong colony very much to draw from it a frame of brood if that brood consists of eggs and very young larvæ, for that frame can soon be replaced, and the queenless colony can just as well be taking care of brood as not.

2. The manner of introducing may have had something to do with it, but sometimes bees will kill a queen when no reason for it can be seen. Bees are freaky.

3. There was no harm in uniting two queenless colonies, and very little good, as explained in answer to Ques 1.

4. Giving young brood, as already explained, will be a help, the trouble being that at this time of the year it is not so easy to find plenty of full frames of brood. If you have two or more strong colonies with young queens, you may get one or more such frames from each; at any rate you can take the youngest brood you can find, and a week later you ought to find those frames replaced so you could make another haul. Don't understand that young brood will build up a colony faster than sealed brood, only it does not cost so much to the colony drawn on.

Reports and Experiences

Bees Did Well

My bees did very well this summer. I will have about a ton of nice white comb honey. I have been getting 10 and 12½ cents a pound for all that I have sold. I started last spring with 20 colonies and increased to 31.

WM. MILLER.

Yakima Co., Wash., Sept. 2.

Season of 1905—Queens

Another honey season is about closed, and while we got a fair amount of honey, the season was not an ideal one. We had an abundant bloom of fruit, dandelion, alsike and white clover, and basswood, but the weather was too cool and wet while the bulk of the bloom was out. On many days the bees could not fly, and on many fair days the bloom seemed to yield no nectar. Clover seemed to yield but little for at least 2 weeks after it came into bloom; basswood yielded nothing, and has not for several years. While I have as much honey as I had last year, the yield per colony is not nearly as much.

We had abundant rains all summer, and there still is much white, alsike and sweet clover bloom out, also plenty of heartsease, but the latter seldom yields much in this locality; but the bees are getting enough to live on and keep up brood-rearing, and most of them are in fair shape for winter.

Swarming was not excessive. I increased from 42, spring count, to 66, but some of the increase was made artificially. I had only about 18 natural swarms.

We are often told that many queens are lost on their wedding flight, either by being caught by birds or entering the wrong hive on their return. Doubtless it is true; in fact, I have lost a few by their entering the wrong hive, having found the queens either balled or dead at the entrances of the hives, while a colony near by, having a virgin queen, was minus its queen. But from observation I am inclined to think that as many, or more, queens are lost in other ways.

Six or 7 days after swarming I usually cut off all queen-cells but one, to prevent after-swarms, but this season the weather did not always admit of doing the work soon enough, so one day, after several days of rainy, cool weather, when the work should have been done, I opened the hive of a colony that had cast a swarm 8 or 9 days previously. On the first comb I lifted I saw queen-cells torn down; on the next I found a cell from which a queen had hatched, and on the same comb a young queen as lively as a cricket, but with the merest rudiments of wings. I promptly killed her, and, fortunately, found cells not yet torn down, from which they soon had a perfect queen.

On another occasion I saw quite a commotion in front of another hive that had previously cast a swarm, and on examination I found a virgin queen with defective wings, floundering on the ground with a handful of bees with her. She had evidently started on her wedding-trip, and, not being able to fly, fell in front of the hive. In both of these instances, had I not discovered the defective queens when I did, I would later on have had queenless colonies, and probably would have concluded that the queens were caught by birds or had entered wrong hives.

At another time I cut all cells from the combs of a colony except one very fine one, and, later on, when I made an examination as to whether or not they had a laying queen, I found them queenless, and the fine, large cell still on the comb with a dead queen in it. Here, again, had the cell not been there to tell the tale, I might have said the queen was lost in mating.

Taking all these circumstances into consideration, I am inclined to think that as many, or more, queens are lost from other causes than by being caught by birds or entering wrong hives on their mating flight.

Many colonies that cast swarms and turned up queenless when too late to remedy the matter, could be saved if bee-keepers would make prompt examinations—as soon as young queens ordinarily should be laying.

A. H. SNOWBERGER.

Huntington Co., Ind., Sept. 7.

Common Motherwort

I enclose a plant that has made its appearance in this section in small quantities. It began blooming about May 1, and has continued to do so until now. There has not been a single day, unless hard rain, that the bees have not been on it in great numbers. I am sure it is a great honey-yielder. I have asked many people if they knew anything of the plant, and have not been able to find anyone who did. It is usually found about old barns, stables, and any old, deserted houses.

L. H. SUDDITH.

Cabell Co., W. Va., Sept. 5.

[The plant is the common motherwort—Leonurus Cardiaca—and, as you suspect, is a great honey-plant.—C. L. WALTON.]

Shaken Swarms—Swarms Deserting—Home-Made vs. Factory-Made Hives

On page 501 it speaks of giving brood to shaken swarms. In handling such swarms I found it best to put the old queens and 9-10 of the bees in a new hive, with strips of foundation for guides in the frames, one frame of brood being given if there was no honey in the fields, but if honey was plenty in the fields the bees would generally stay without any brood being given.

On the same page it speaks of swarms deserting. I use Father Langstroth's plan: Put the bees into boxes with wire-cloth covers, and set the boxes and bees in the shade for 5 hours or more, until the swarming-fever is over, then put the bees into a cool hive.

A great deal is said about hives, and for and against the factory-made hive. After having handled hives for 30 years, and making my own hives, I wish to say that very few men can make their own hives so that they will be as cheap or as good, or will last so well, as those made by any good, honest manufacturer—and I do not know of any dishonest ones. I make my own hives, and I think I have the best hives that I have ever seen or heard of—certainly the best for those who wish to keep only 50 colonies of bees or less, and keep them on the same stands summer and winter; the best for ease of handling, and for safety in wintering, but they cost a trifle more than ordinary hives. They are well made, but not as well as some I have seen from the factory. WM. H. K. EAGERTY.

Republic Co., Kans., July 31.

One of the Asters

What is the name of the flower I send? The bees work on it first-rate here in the fall, and it grows all over in old burnings. It is in full bloom now, and will last till frost comes. Is there much honey in it, or is it pollen the bees are after? V. A. GOODNOW.

Lincoln Co., Wis.

[The flower is one of the asters, and, along with the other members of the same class, it furnishes a large and excellent supply of nectar for the bees.—C. L. WALTON.]

Poor Season—No Honey

We have had a very bad season. During fruit-bloom it was very wet, then when white clover came it turned very dry, so much so that the clover was dried up entirely. Then we had the corn-tassel, but this hardly kept the bees alive. Now we have the Spanish-needle and a few late flowers. We have had no honey yet. J. K. BOYD & SON.

Boone Co., Mo., Aug. 26.

Crop Practically a Failure

Our crop of honey from 650 colonies of bees is only 4000 pounds. No comb honey from our 3 comb yards. There is a shortage of at least 80,000 pounds of honey in this valley.

Ada Co., Ida., Sept. 9. E. F. ATWATER.

Most Excellent Honey Crop

I have 20 colonies of bees now. I thought to write about the entire honey season, as it is nearly over with us, but I was afraid that if I gave the amount of honey or the number of sections of honey gathered by a single colony, there might be plenty that would doubt it, if it were published. So I'll only say that the honey crop here was excellent—most excellent—in every respect.

EMANUEL B. KAUFFMAN.

Lebanon Co., Pa., Sept. 6.

He Will Be a Bee-Keeper

My father is a subscriber to the American Bee Journal, and I enjoy reading it very much. I am 10 years old.

We have 3 colonies of bees. One of them is in an observation hive. I sit with it open for hours at a time, and watch the bees. I enjoy watching them, and when I grow older I mean to have some myself.

Linn Co., Mo., Sept. 8. DAMON MURPHY.

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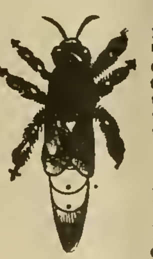

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2 for $1.10, or 6 or more at one time, 50 cents each. The Weekly American Bee Journal one year (either new or renewal subscription) with one of these fine Queens—both for $1.30. Better have one or more of the Queens. They give satisfaction. Remember, the above offers expire Oct. 1, 1905. First come first served.

An Untested Italian Queen-Bee FREE as a Premium

For Sending One New Subscriber

for the American Bee Journal for a year with $1.00.

As has been our custom heretofore we offer to mail a fine Standard-Bred Untested Italian Queen to the person who complies with the following conditions, all of which must be strictly followed:

1. The sender of a new subscriber must have his or her own subscription **paid in advance** at least to the end of this year.

2. Sending your own name with $1.00 for the Bee Journal will not entitle **you** to a Queen as a premium. The sender must be already a paid-in-advance subscriber as above, and the new subscriber must be a **NEW** subscriber; which means, further, that the new subscriber has never had the Bee Journal regularly, or at least not for a whole year previous to his name being sent in as a new one; and, also, the new subscriber must not be a member of the same family where the Bee Journal is already being taken.

We think we have made the foregoing sufficiently plain so that no error need be made. Our Premium Queens are too valuable to throw away—they must be **earned** in a legitimate way. They are worth working for.

Address all orders to
GEORGE W. YORK & CO.
334 Dearborn Street, CHICAGO, ILL.

Bee Supplies

Guaranteed Superiority!

Lowest Prices

We have been making **Bee-Hives, Sections,** etc., for over 20 years.

New .. Illustrated .. Catalog free; also sample copy of

The American Bee-Keeper

(Monthly, 50 cts. a Year.)

The **best** magazine for beginners. (It has been published by us regularly for 15 years.)

Address,

THE W. T. FALCONER MFG. CO.,
JAMESTOWN, N. Y.

Please mention Bee Journal when writing.

Headquarters for Bee-Supplies

ROOT'S GOODS

Complete stock for 1905 now on hand.
Freight rates from Cincinnati are the lowest,

ESPECIALLY FOR THE SOUTH, AS ALL FREIGHT NOW GOES THROUGH CINCINNATI.

10 Percent Discount

For Cash Orders Received in

SEPTEMBER

This applies to all goods with exception of Shipping-Cases and other Honey-Packages for current use.

At Root's Factory Prices

C. H. W. WEBER CINCINNATI ...OHIO...
Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

PURE BASSWOOD HONEY

IN 60-POUND CANS

We have a good supply of **Pure Basswood Honey** in 60-lb. cans that we can ship by return freight at these prices: 1 can in a box, at 8 cents a pound; 2 or more cans, boxed, at 7½ cents—all f.o.b. Chicago. Cash with order. Sample, by mail, 8 cents in stamps, to cover package and postage.

Address,

YORK HONEY AND BEE SUPPLY CO.
141-143 Ontario St., CHICAGO, ILL.

NEW COMB HONEY-CROP OF 1905

We believe it would pay those having it in car lots or otherwise to write us. Give us your lowest spot cash prices, and fully describe the goods and style of package; when you can ship, etc. We handle more of these goods than any other firm in the U.S. Yours for business,

THOS. C. STANLEY & SON. Bees and Honey
MANZANOLA, COLO., and FAIRFIELD, ILL.
28Atf Please mention the Bee Journal.

Big Discounts on Bee-Supplies

The following discounts apply on all orders except honey-packages for current use:

For cash orders before Oct. 1—10 percent

Nov. 1......	9 percent	Feb. 1	6 percent
Dec. 1	8 "	March 1....	4 "
Jan. 1	7 "	April 1	2 "

We handle **LEWIS' GOODS**, and carry a large stock, which insures prompt shipment. Catalog free. Address,

LOUIS HANSSEN'S SONS,
213 & 215 W. 2d Street, DAVENPORT, IOWA
38Atf Please mention the Bee Journal.

FOR SALE

Until further notice, finest quality new crop California Water-White White Sage and Light Amber **HONEY** in 60-lb. tins, 2 in a case; new cans and new cases Write for prices and samples, and state quantity you want.

HILDRETH & SEGELKEN
265 & 267 Greenwich Street, NEW YORK, N.Y.
34Atf Please mention the Bee Journal.

Honey and Beeswax

CHICAGO, Aug. 18—The demand has absorbed all the offerings of fancy and A No. 1 grades of white comb honey at 14c, while No. 1 has sold at 13@13½c. No call at present for other than the best grade, it really being difficult to place what ordinarily is called No. 1. Extracted, white. 6@7c; amber. light and dark, 5@6c. Bee wax, 28c. R. A. BURNETT & Co.

KANSAS CITY, Aug. 24.—The honey market here shows a decided improvement and the market is firm at $2.85 to $3.00 for No. 1 and fancy white comb in 24 section cases. Amber and other grades are selling for less, according to quality. Extracted in fair demand, white selling at 6½cents; other grades down to 4½c. Beeswax, 28c. C. C. CLEMONS & Co.

CINCINNATI, O., Sept. 8.—It appears by this time, that comb honey will not be so plentiful. In some parts of the West the crop has been more or less a failure. Prices so far have not changed much yet. Fancy white comb. 13@15c. Extracted seems to be more plentiful. In barrels, light amber, 5¼@5½c; in cans, ½c more; white clover from 7@8c. Beeswax, 26c.
C. H. W. WEBER.

INDIANAPOLIS, Sept. 2—There is a good demand for strictly fancy white comb honey, demand and supply running about even. Demand for lower grades of comb honey not good. Numerous shipments of honey arriving, but no one producer seems to have very great quantities to offer. I quote fancy white at 14@15c; No. 1 in poor demand at 12c, and amber dull at 10c. Best grade extracted brings 8@9c in 60-lb. cans; amber slow at 5c. Beeswax, 28@30c.
WALTER S. POUDER.

NEW YORK, Sept. 7.—New crop of comb honey is now arriving in a small way and fancy stock finds ready sale at 14@15c per pound; No. 1, at 12@13c, and amber at 11c. No buckwheat on the market as yet. Extracted in good demand, and we quote California at 6@7½c per pound, according to quality; Southern at from 55@65c per gallon; white clover at 6½@7c per pound. Beeswax steady at 29c per pound.
HILDRETH & SEGELKEN

TOLEDO, Aug. 18—The market on comb honey at this writing is practically the same as last; however, honey is being offered quite freely, and this has a tendency to decline the price. On account of the heavy receipts of fruit there is no great demand for either comb or extracted at present. Fancy white clover in a retail way brings 15c; No. 1, 14c; little demand for amber. Extracted, white clover, in barrels, 6@6½c; in cans, 7@7½c; amber in barrels, 5@5¼c; in cans, t@6½c. Beeswax, 28@30c. GRIGGS BROS.

PHILADELPHIA, Sept. 9.—Some honey arriving, with prospects of a good crop all through the East; but no call for comb honey, so that prices are not as yet established. Extracted honey is arriving freely and is selling as follows: Fancy white, 7@8c; amber, 6@7c. Beeswax, 27c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

CINCINNATI, Sept. 7.—There is little to report since our quotation two weeks ago. The supply of both comb and extracted honey is fair, and the demand is good. We offer extracted honey as follows: Amber, in barrels and cans, at 5¾@6½c, respectively. White clover at 7@8½c. Fancy white comb honey at 12@15c. Beeswax, 29 cents. THE FRED W. MUTH CO.

ALBANY, N. Y., Sept. 8.—Honey market is opening up in good shape here, with increasing demand for new crop. Comb, fancy white, 15@16 cents; good white, 14@15c; No. 2, 13@14c; buckwheat, 12½@13c. Extracted, white, 7@7½c; mixed, 6½@7c; buckwheat or dark, 6@6½c. Beeswax, 28@30c. H. R. WRIGHT.

SAN FRANCISCO, Sept. 4.—White comb. 1-lb. sections, 9@10 cents; amber, 7@8c. Extracted, water-white, 4¾@5c; white, 4¼@4½c; light amber, 3¾@4 cents; amber, 3@3½c; dark amber, 2½@3c. Beeswax, good to choice, light, 26@27c.

The market continues very weak, but prices are being maintained as quoted. Stocks have a tendency to accumulate under normal receipts and a still further reduction in price may be necessary before the honey in first hands can be moved. Receipts are of good quality, the average being much lighter in color than usual.

HONEY AND BEESWAX

When consigning, buying or selling, consult

R. A. BURNETT & CO.,
199 SOUTH WATER ST. CHICAGO, ILL.

Please mention Bee Journal when writing.

Northern King Queens

One Untested, 50c; Tested, $1.00. Try one.

Address, **B. F. SCHMIDT,**
R.F.D 1, N. BUENA VISTA, Clayton Co., IOWA

For Sale or Rent

25 Colonies of Bees and Supplies.

BOX 135. DOWNERS GROVE, ILL.

10%
DISCOUNT

ON ORDERS ACCOMPANIED BY CASH SENT US DURING

SEPTEMBER

9 percent during October.
8 percent during November.
7 percent during December.
6 percent during January.
4 percent during February.
2 percent during March.

This applies to all goods excepting Honey-Packages for current use.

On receipt of the names and addresses of 5 bee-keepers in your vicinity we will mail to any address free of charge postpaid a copy of our little book, "Bee Pranks," which is a pamphlet compiled from newspaper clippings containing many laughable and interesting anecdotes which have actually happened in the life of the bee. Published only by **G. B. LEWIS CO., Watertown, Wis., U.S.A.**

The Following are Distributing Points for Lewis' Goods:

ENGLAND
E. H. Taylor, Welwyn, Herts.

CUBA
C. B. Stevens & Co., Havana.

CALIFORNIA
Paul Bachert, Acton.
California Lumber & Milling Co., San Francisco.

COLORADO
R. C. Aikin, Loveland.
Arkansas Valley Honey Producers' Association, Rocky Ford.
Colorado Honey Producers' Association, Denver.
Fruit Growers' Association, Grand Junction, Robert Halley, Montrose.

ILLINOIS
Dadant & Sons, Hamilton
York Honey and Bee Supply Co., 141 and 143 Ontario St., Chicago.

INDIANA
C. M. Scott & Co., Indianapolis.

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Adam A. Clarke, Le Mars.
Louis Hanssen's Sons, Davenport.

MICHIGAN
A. G. Woodman, Grand Rapids.

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MISSOURI
E. T. Abbott, St. Joseph.

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Southwestern Bee Co., 438 W. Houston St., San Antonio.

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G. B. LEWIS CO. Manufacturers of Bee-Keepers' Supplies **Watertown, Wis.** U. S. A.

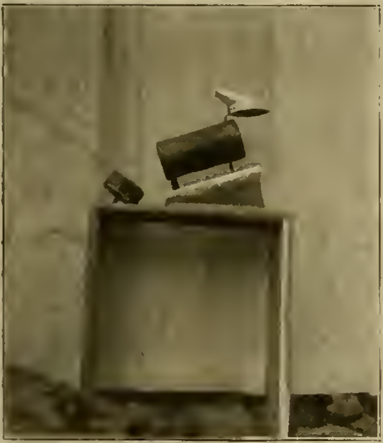
National Bee-Keepers' Convention at Chicago, Dec. 5, 6, 7

AMERICAN BEE JOURNAL

MASSACHUSETTS AGRICULTURAL COLLEGE

WEEKLY—$1.00 A YEAR
Published by GEORGE W. YORK & CO., 334 Dearborn Street

45th Year CHICAGO, ILL., SEPTEMBER 28, 1905 No. 39



Conrads' Improved Bee-Smoker.

No. 2.—Mr. Kilgore and His No. 1 Comb Honey.

No. 3.—One of Mr. Kilgore's Tiered-Up Hives.

No. 1.—Apiary of S. G. Kilgore, of Madison Co., Ohio.

Apiary of W. D. Ball, of St. Joseph Co., Ind.

(See page 678)

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY
GEORGE W. YORK & COMPANY
334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec05" on your label shows that it is paid to the end of December, 1904.

SUBSCRIPTION RECEIPTS.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows that the money has been received and credited.

ADVERTISING RATES will be given upon application.

National Bee-Keepers' Association

Objects of the Association

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00

General Manager and Treasurer—
N. E. FRANCE, Platteville, Wis.

☞ If more convenient, Dues may be sent to the publishers of the American Bee Journal.

The Honey-Producers' League

(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

MEMBERSHIP DUES

1. Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.
2. Any honey dealer, bee-supply dealer, bee-supply manufacturer, bee-paper publisher, or any other firm or individual, may become a member on the annual payment of a fee of $10, increased by one-fifth of one (1) percent of his or its capital used in the allied interests of bee-keeping.

GEORGE W. YORK, Manager,
334 Dearborn St., CHICAGO, ILL.

Italian Queen-Bee Free as a Premium

To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us ONE NEW subscription with $1.00 for the Bee Journal a year. Now is the time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.

IN THE HEART OF MICHIGAN

Within a hundred miles of me are over ¾ of the bee-keepers of Michigan. I am on the Pere Marquette R.R., which completely covers this region. Root's Goods, Factory Prices, Prompt Service, Low Freight. Send for Catalog.

GEORGE E. HILTON,
28A12t FREMONT, MICH.

Mention Bee Journal when writing.

Now is the Time to Order

Your Bee-Hives, Sections, Shipping-Cases, Berry Boxes, and Crates for the coming season. By sending us a list of goods wanted, we can save you money.

SHEBOYGAN FRUIT BOX CO.
35A18t SHEBOYGAN, WIS.

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"If Goods are wanted Quick, send to Pouder"

BEE-SUPPLIES

Root's Goods at Root's Prices

Everything used by Bee Keepers.
POUDER'S HONEY-JARS. Prompt Service.
Low Freight Rates. ∴ ∴ ∴ Catalog Free.

If you wish to purchase finest quality of HONEY for your local trade, write for my free monthly price-list of honey.

Why not secure your BEE-SUPPLIES NOW FOR NEXT SEASON'S USE, and avail yourself of the following very liberal discounts? Goods all Root Quality.

Percent
For cash orders before Oct. 1..........10
For cash orders before Nov. 1.......... 9
For cash orders before Dec. 1.......... 8
For cash orders before Jan. 1..7 percent
For cash orders before Feb. 1..6 percent
For cash orders before Mar. 1..4 percent
For cash orders before Apr. 1..2 percent

WALTER S. POUDER,
513-515 Massachusetts Ave., INDIANAPOLIS, IND.

Please mention Bee Journal when writing.

DITTMER'S FOUNDATION IS THE BEST

Now is the time to prepare for next season.

If You Want to Save Money on Foundation, Working Wax for Cash, and on a full line of SUPPLIES, write for prices and discounts, and samples of our Superior Foundation.

E. Grainger & Co., Toronto, Ont., Agents for Canada.
The Bee and Honey Co., Beeville, Tex., Agents for Texas.

GUS. DITTMER, - Augusta, Wis.

Mention Bee Journal when writing.

IT'S TIME TO FEED

Feeding time is here and you will want feeders. There are none better made than the Miller-Boardman Entrance Division-Board Feeder and the Simplicity Bottom-Board Feeder. They can be attached to the bottom-board and left all the year around. Are made on honor and sold direct from the factory to you, saving you a middleman's profit.

Your orders will receive prompt attention. Send them early.

Don't fail to send us your address for our new catalog, which will be very comprehensive, and will give you many valuable pointers upon bee-keeping.

JOHN DOLL & SON,
Power Building, - - MINNEAPOLIS, MINN.

Please mention Bee Journal when writing.

10 Percent Discount ON ORDERS FOR accompanied by cash sent us in Lewis' Bee-Supplies

SEPTEMBER. This applies to all goods excepting Honey-Packages for current use. By RETURN FREIGHT OR EXPRESS. Send to

H. M. ARND, Mgr. YORK HONEY AND BEE SUPPLY CO. (Not Inc).
141 & 143 Ontario Street, CHICAGO, ILL.

(5 short blocks north of the C. & N. W. Ry. Passenger Station, using the Wells St. Cable Line from center of city to Ontario St.)

Long Distance Telephone—North 1559

Catalog and prices on Honey on application. If you want Good Goods at Factory Prices and Prompt Shipment, send your orders, or call on us.

BEESWAX WANTED—26c cash, or 28c when taking Bee-Supplies in exchange—delivered here.

Please Mention the American Bee Journal when writing Advertisers

“DADANT’S FOUNDATION”

—AND—

BEE-SUPPLIES

Revised Prices on Foundation

NAME OF GRADE	IN LOTS OF 1-lb.	5-lbs.	10-lbs.	25-lbs.	50 lbs.
Medium Brood	.55	.53	.51	.49	.48
Light Brood	.57	.55	.53	.51	.50
Thin Surplus	.62	.60	.58	.56	.55
Extra Thin Surplus	.65	.63	.61	.59	.58

DISCOUNTS for Early Cash Orders

During	September	10	percent
“	October	9	“
“	November	8	“
“	December	7	“
“	January	6	“
“	February	4	“
“	March	2	“

Beeswax Wanted at all Times.

* * *

DADANT & SONS, Hamilton, Ill.

WANTED

FANCY COMB HONEY IN NO-DRIP SHIPPING CASES, ALSO EXTRACTED HONEY. IF YOU HAVE ANY TO OFFER, QUOTE US YOUR ROCK BOTTOM CASH PRICE DELIVERED HERE, AND MAIL US A SMALL SAMPLE OF THE EXTRACTED HONEY. WE BUY EVERY TIME THE PRICE IS RIGHT, AND REMIT PROMPTLY.

THE FRED W. MUTH CO.

No. 51 WALNUT STREET, CINCINNATI, OHIO.

Bee - Supplies!

We carry a large stock and greatest variety of everything needed in the Apiary, assuring best goods at lowest prices, and prompt shipments. We want every bee-keeper to have our **Free Illustrated Catalog**, and read description of Alternating Hives, Massie Hives, etc. **Write at once for Catalog**, either English or German language.

KRETCHMER MFG. CO., Red Oak, Iowa.

—AGENCIES—

Trester Supply Co., Lincoln, Neb.
Shugart & Ouren, Council Bluffs, Iowa.
Fulton & Ford, Garden City, Kansas.
I. H. Myers, Lamar, Colo.
Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex.

Get New Subscribers

Why not get a New Subscriber for the American Bee Journal, to send with your own renewal?

DEATH TO LICE.

LICE SAP LIFE

That’s how they live and thrive. You can’t have healthy, profitable fowls or stock and have lice too.

Lambert’s Death to Lice

promptly kills all insect vermin and makes sitting hens comfortable. Sample 10c; 100 oz., $1.00 by express.

O. K. STOCK FOOD CO.,
D. J. Lambert, Vice-Pres.
406 Monon Bldg., Chicago, Ill.

Bee-Keepers’ Early Discounts

◆

Now is the Time to send in your order for goods for use next season, and for all orders where cash accompanies we allow the following discounts:

Before	October 1	deduct	10	percent
“	November 1	“	9	“
“	December 1	“	8	“
“	January 1	“	7	“
“	February 1	“	6	“
“	March 1	“	4	“
“	April 1	“	2	“

Freight-Rates from Toledo are the lowest Can take Honey and Beeswax in exchange for Supplies if you desire. Send for free illustrated Catalog. It describes and illustrates everything for both the Poultry and Bee Keepers.

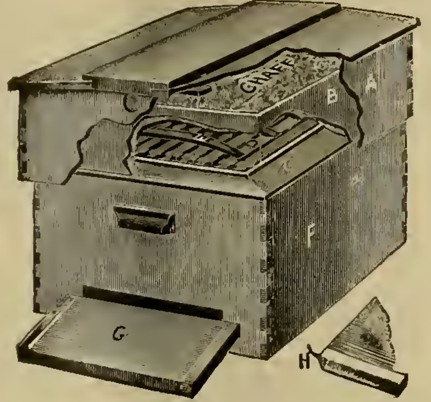
GRIGGS BROS.
521 Monroe Street,
TOLEDO, - OHIO.

Mention Bee Journal when writing.

WINTER IS COMING

Are Your Bees in Good Condition?

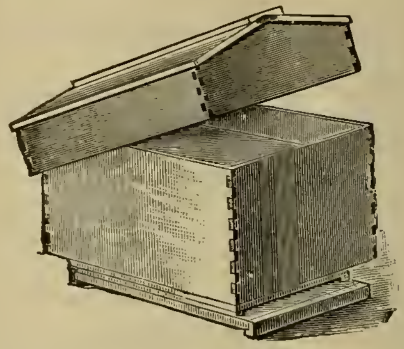
Outdoor Wintering is the Safest for the Majority of Bee-Keepers



Dovetailed Chaff Hive

This is one of the very best hives we sell; and for wintering bees, or for the production of comb honey, we do not know of anything better.

A good many suppose that double-walled hives are useful only for winter; but in localities subject to cool nights and a very hot burning sun during the middle of the day, they are none too warm for comb honey. Some of the best bee-keepers of the country are beginning to learn that such a hive, having well-protected supers, produces not only more, but a better-filled comb honey. Our dovetailed chaff has 2 inches between the walls, and when packed with chaff, sawdust, planer-shavings, or any loose material, makes a very warm brood-nest. The water-table, or picture-frame-like rim, covering the inner and outer walls, permits the use of the same supers that are used in the single-walled hives. When these supers are put on this hive and then covered with its warm, telescopic cover, the bees are in position to store comb honey as they can not do in supers not so protected.



Dovetailed Winter Case

There are those who, having single-walled hives desire something which, at a slight additional expense, will convert their hives into double-walled abodes for bees during the winter. Again, some others who winter in-doors wish something cheap and serviceable in the way of a protection to put over the hives after they are set out in the spring. To supply such we are prepared to furnish an outside case having the same cover and the same outside shell as go with the chaff hive described here. These are set over the 8-frame hive, and the opening at the bottom of the case (that is, the space between the hive inside and the case) is stopped up with the padded sticks. Packing material is poured in the space, after which a cushion or tray is put on top of the frames, and the cover set over the whole. This arrangement as a whole has given the best of results.

These are large enough to go over 10-frame Dovetailed and Simplicity hives, allowing only ⅜-inch space on each side

See prices of both 8 and 10 frame sizes in bottom line of table below.

Table of Prices of Dovetailed Chaff Hives	Designating Letter	EIGHT-FRAME Nailed and Painted	EIGHT-FRAME KD IN FLAT PRICE IN LOTS OF 1	5	10	25	Weight of Ten	TEN-FRAME Nailed and Painted	TEN-FRAME KD IN FLAT PRICE IN LOTS OF 1	5	10	25	Weight of Ten
1-story Chaff Hive, no super or upper story, with tel. and super cover and chaff-tray.													
Without foundation starters	YW5	3 25	2 70	12 25	23 00	54 50	400	3 50	2 80	12 75	24 10	57 00	410
With foundation for 1-inch starters.....	YW6	3 45	2 80	12 50	23 50	55 75	400	3 60	2 90	13 00	24 60	58 25	410
½-story Chaff Hive for comb honey without sections or foundation starters													
For 4¼x4¼x1⅞ beeway sections	YW52S	4 00	3 20	14 50	27 00	63 75	470	4 15	3 35	15 25	28 50	67 50	490
For 4¼x4¼x1½ plain sections...........	YW52P						460						480
For 4x5x1⅜ plain sections, in D. super ..	YW52M	4 15	3 35	15 25	28 50	67 50	490	4 30	3 50	16 00	30 00	71 25	525
Same with sections and foundation starters													
With 4¼x4¼x1⅞ beeway sections.......	YW64S	4 40	3 50	15 75	29 50	69 50	480	4 55	3 65	16 50	31 00	73 25	515
With 4¼x4¼x1½ plain sections..........	YW64P						470						505
With 4x5x1⅜ plain sections, in D. super..	YW64M	4 55	3 65	16 50	31 00	73 25	510	4 70	3 80	17 25	32 50	77 50	550
Winter-case body with padded sticks	Z	75	60	2 75	5 00	12 00	80	80	62	2 85	5 20	12 25	85
Winter-case with 7-inch cover complete......	YZ	1 50	1 20	5 50	10 00	24 00	180	1 60	1 25	6 75	10 50	25 00	190

Complete prices and descriptions in general Catalog. Ask for it.

9 Percent Discount for October Cash Orders

The A. I. Root Company, MEDINA, OHIO

BRANCHES

Chicago, 144 E. Erie St. Philadelphia, 10 Vine St. New York, 44 Vesey St.

Established in 1861
THE AMERICAN
Oldest Bee-Paper in America
BEE JOURNAL

(Entered at the Post-Office at Chicago as Second-Class Mail-Matter)

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor
CHICAGO, ILL., SEPTEMBER 28, 1905
Vol. XLV—No. 39

Editorial Notes and Comments

Why Do the Bees Get No Honey?

An experienced bee-keeper wrote thus to a honey-dealer:

> "Why did I not get a crop of honey? I don't know; it was not too wet nor too dry; all I know is that I don't know."

The dealer sent the card to Dr. Miller, presumably for reply. Dr. Miller has forwarded the card to this office without even the formality of saying, "I don't know;" and from the date of the card he must have held it a sufficient time to do some wrestling over the question.

Why is it that there are times when plenty of bloom is in sight, rain falls seasonably, and all conditions point to a big harvest, and yet the harvest is lacking? This year, in northern Illinois, white clover was abundant, at least in parts; the bees did good work on it up to the latter part of July, and then the flow seemed to cease rather abruptly, although clover continued to bloom as abundantly as before,.and the weather was all that could be desired. Why was the nectar lacking?

If any one has the right answer to the question, he will confer a favor by forwarding it without delay to this office.

Black Bees Championed

According to D. M. M., in the British Bee Journal, black bees excel in 17 specific points, some of which are: They begin brood-rearing earlier than foreign races, and keep it up later; take more readily to supers, and stay in them later; produce more heat than a like number of other races; can breed early with a smaller force of bees; store surplus with a smaller force; send more foragers abroad out of every thousand bees.

D. M. M. is a prominent writer of good reputation, and it would be interesting to know whether others have come to the same conclusions, or whether Scotch prejudice may have something to do in the case. One statement may at least be questioned:

> "A large proportion of Canadian bees, as well as those of a great part of the United States, are blacks, or have black blood in their veins, while many large apiarists even there claim still that they are the best bees."

Can any one give the names of five large apiarists in the United States who claim that blacks are best? Can any one give the name of one such?

National Convention Program

We have received the following from the Secretary:

Program for the National Convention.

The National Bee-Keepers' Association will hold its annual convention at the Revere House, corner of Clark and Michigan streets, in Chicago, during the Fat Stock Show, when exceedingly low rates may be secured on the railroads. The dates for the meeting are Dec. 5, 6 and 7. Rates at the hotel are 75 cents for a room alone, or 50 cents each, where two occupy the same room. Meals are extra, or they may be secured at near-by restaurants. The program is as follows:

FIRST DAY—Tuesday.

Evening Session—7:30 p.m.

Wax-Rendering Methods and their Faults—O. L. Hershiser, Buffalo, N. Y.

Can the Tariff on Comb Honey be Tinkered to the Advantage of the United States Bee-Keeper?—Hildreth & Segelken, New York.

SECOND DAY—Wednesday.

Morning Session—9:30 a.m.

How Many Bees Shall a Man Keep?—E. D. Townsend, Remus, Mich.

Short Cuts in Bee-Keeping—M. A. Gill, Longmont, Colo.

Question-Box.

Afternoon Session—2:00 p.m.

The Control of Increase—L. Stachelhausen, Converse, Tex.

Migratory Bee-Keeping—R. F. Holtermann, Brantford, Canada.

Question-Box.

Evening Session—7:30 p.m.

Contagious Diseases Among Bees and How to Distinguish Them—Dr. Wm. R. Howard, Ft. Worth, Tex.

Experimental Apiculture—Dr. E. F. Phillips, Washington, D. C.

THIRD DAY—Thursday.

Morning Session—9:30 a.m.

The Honey-Producers' League—Can it Help Bee-Keepers?—R. L. Taylor, Lapeer, Mich.

The Business End of Bee-Keeping—N. E. France, Platteville, Wis.

Question-Box.

Afternoon Session—2:00 p.m.

In What Way Can Bee-Keepers Secure their Supplies at Lower Prices?—W. H. Putnam, River Falls, Wis.

How the Producer and Dealer May Advance their Mutual Interests—Fred W. Muth, Cincinnati, Ohio.

Question-Box.

Evening Session—7:30 p.m.

What Have We to Hope for from the Non-Swarming Hive?—L. A. Aspinwall, Jackson, Mich.

Poultry Keeping for the Bee-Keeper—Emerson T. Abbott, St Joseph, Mo.

W. Z. Hutchinson, *Sec.*

It is none too early for bee-keepers to begin to prepare now for attending the National convention the first week in December.

Profits of Sugar-Feeding?

The following paragraph appears in the American Bee-Keeper:

> In reviewing the report of the last meeting of the National Bee-Keepers' Association, attention was arrested by comments on the feeding of sugar for producing honey. Some earnest men in their efforts to show that the possibilities were overdrawn compared with the prices of sugar and of honey, saying that with sugar at 6 cents and honey at 5 cents obviously there could be no profit to induce the practice. In their zeal they quite overlooked the fact that the 6 cents' worth of sugar makes 3 pounds of feeding syrup and 2 pounds when stored and thickened. Sixty-six percent gross profit is quite a temptation to a good many men, and when a 3-cent-per-pound stored syrup can be sold for 15 cents, there is temptation enough to warrant a lot of strong preaching against the feeding of any syrup for any purpose except prevention of absolute starvation.

The fight against the feeding of sugar for any purpose except prevention of absolute starvation is a commendable one. And if "a 3-cent-per-pound stored syrup can be sold for 15 cents" (would there not in that case be 400 percent gross profit instead of 66?), there is certainly warrant for strong preaching, and perhaps something besides preaching, to discourage any such practice.

But is not the picture of what can be done with a pound of sugar somewhat overdrawn? Is it a "fact" that a pound of sugar makes 3 pounds of feeding syrup and 2 pounds when stored and thickened? It is only of late years that it is advised to use sugar and water equal parts for feeding, and then only when the feeding is done early. Does any one ever feed two parts water to one of sugar? For late feeding, so that the syrup shall be something like the consistency of honey, Root's "A B C of Bee Culture" gives a gallon of water to 20 pounds of sugar. Counting 8 pounds to the gallon of water, that would make 28 pounds of syrup from 20 pounds of sugar. So instead of a pound of sugar making 2 pounds of stored syrup, as claimed, making an increase of 100 percent, the increase would be only 40 percent—quite a different thing. But in actual practice it would fall much below 40 percent. For in the act of storing, a goodly portion is consumed by the bees for their own sustenance, and a notable portion for making the wax; for of course only comb honey can be under consideration at 15 cents a pound. Indeed, the difference between the amount fed and the amount of the finished product, whether extracted honey be used to feed for section honey, or whether sugar syrup be used to fill combs for feeding, according to reports made, seems to be greater than can well be accounted for. Some of the feed seems to go, without one's knowing where it goes.

This is not said with any intention to encourage or to excuse sugar-feeding, but rather to show any one dishonestly inclined that there is not in trying to make honey out of sugar the bonanza he might suppose.

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Ridding Hives of Ants

W. C. H. says this in the British Bee Journal:

"I tie a little greasy cloth around each leg of the hive-stand, and have no trouble with ants."

Miscellaneous News Items

Mr. Chas. Mondeng, of the Mondeng Mfg. Co., Minneapolis, Minn., dropped in to see us last week. He is making a trip among some of the leading bee-supply manufacturers. He reports a fair business the past season. Mr. Mondeng is an expert machinist and inventor. He will be heard from later on.

◆

Apiary of W. D. Ball.—When sending the photograph of his apiary, Mr. Ball wrote thus:

I enclose a photograph of my apiary of 13 colonies, located in a central portion of a busy city of 50,000 inhabitants. The shrubbery shown in front of the hives is mostly sweet pea vines, with a few tomato plants. The hives face west, and the shrubbery hides the hives at the lower end.

The strong sun was too much for my eyes, which accounts for the squinting look of my face. W. D. Ball.

St. Joseph Co., Ind.

◆

Apiary of S. G. Kilgore.—When forwarding the pictures shown on the first page, Mr. Kilgore had this to say:

Editor York:—I send some kodack views, and as I am a novice in the photograph business, they are nothing extra.

No. 1 is a partial view of my apiary of 40 colonies after I had taken off about half the supers. I have been keeping bees about 15 years, and produce only comb honey. I try to keep down increase to one prime swarm to each colony, as from 40 to 50 colonies is all I am able to take care of, being a cripple with rheumatism, and have poor health. This business gives me plenty of fresh air and sunshine, and I delight to work with bees.

I sell only fancy and No. 1 comb honey, and find a ready sale for all I have, at 17 and 18 cents per pound. I stamp my name, address and telephone number on each section I sell. I have never yet produced enough to supply all my home trade. I sell from 12 to 50 pounds to each family for winter use, and let them keep it in nice, clean shipping-cases. When I call for an empty case I leave a full one in its place.

No. 2 is some of my No. 1 honey, with myself at the left with a bee-veil on. The honey is in 4¼x4¼ plain and bee-way sections. This year's production will be 75 percent of a full crop.

No. 3 is one of my dovetailed hives with 5 supers on; also a Dibbern queen-trap. This colony gave me over 100 pounds of No. 1 comb honey, and it has a remarkably thrifty queen.

I requeen my apiary about every two years, and buy all queens from a practical breeder. I think it is cheaper to buy queens of a reliable breeder than to go to the trouble of rearing them. I clip all queens, and my way of introducing them is as follows:

I place each new queen, when it arrives, on top of the frames of the colony to which I wish to introduce it. I leave it there for two days, so the new queen will acquire the scent of the colony. At the end of two days I open the hive, when the old queen is generally found clinging to the cage, for she will always hunt up a rival queen to give battle, but the old queen and bees can not harm the new queen inside the cage. I remove the old queen, and at the same time expose the plug of candy in the cage, and then close the hive, and the job is done. I never lose a queen by this method, and it saves hunting all over the hive to find the old queen.

According to your request, I had an article of a column published in our county newspaper, in regard to so-called manufactured comb honey, and the offer of $1000 reward. If every bee-keeper would enlighten the people with an article in his county paper there would soon be a big demand for honey, and at good prices. S. G. Kilgore.

◆

Conrads' Improved Bee-Smoker.—Wald. C. Conrads, of Comal Co., Tex., writes as follows about his double-end lighting smoker:

I have noticed in the American Bee Journal (pages 571 and 619) that other bee-keepers also feel the need of a smoker that opens at both ends. I send herewith a photograph of my improved smoker. Here is what I claim for it:

It gives the advantage of filling from either end, and one can always light it from the breech, while it can be refilled from the muzzle, which brings down the fire again to the breech, so necessary to prevent the smoker from throwing out sparks. After having refilled the smoker several times from the muzzle, ashes having accumulated, all that is necessary to do is to open the breech, which will then allow the ashes to fall out, yet leaving back enough fire to refill the smoker again from the muzzle after having replaced the breech.

All that is needed is a nozzle from a Corneil smoker; remove the snout from the Vesuvius smoker so that you may put on the Corneil snout, and you have a smoker possessing the features of both smokers combined in one.

Waldo C. Conrads.

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Not Candidates for Re-election.—We have received the following notices, with the request that they be published in these columns:

Please say in the American Bee Journal that I am most positively not to be considered as a candidate for re-election as Director.

C. C. Miller.

McHenry Co., Ill., Sept. 16.

Editor York:—Won't you kindly say through the columns of the American Bee Journal that I am not a candidate for re-election to the office of Director of the National Bee-Keepers' Association? I most sincerely thank the members of that organization for the honor they have conferred upon me in the past, and wishing them every success and prosperity for the future, I doff my hat and make my exit. J. M. Hambaugh.

San Diego Co., Calif., Sept. 13.

Both Dr. Miller and Mr. Hambaugh deserve the gratitude of bee-keepers everywhere for their many years of faithful devotion to the interests of bee-keeping, as directed through the National Association. While their loss as directors will be felt, still it is hardly fair to impose on a few good men the work of the National Association when there are others who need to be trained in the service. And those others will never be trained unless they are given the opportunity of gaining experience.

All honor to the loyal and true men who have given so freely and unselfishly of their time and wisdom for the progress and advancement of practical apiculture! And all hail to the new and eager-to-do-and-to-dare ones who are willing and able to grapple with the duties and problems that confront the industry of bee-keeping to-day!

"The Honey-Money Stories."—This is a 64-page-and-cover booklet, 5¾x8½ inches in size, printed on enameled paper, entitled, "The Honey-Money Stories." The cover has a picture of a section of comb honey, 3½ inches square, the comb being in gold-bronze, which gives it a very attractive appearance. Then on the gold-bronze comb are printed these words: "From Honey to Health, and from Health to Money."

It is edited by Earl M. Pratt, and contains a variety of short, bright stories interspersed with facts and interesting items about honey and its use. The manufactured comb honey misrepresentation is contradicted in two items, each occupying a full page, but in different parts of the booklet. It has in all 31 halftone illustrations, nearly all of them being of apiaries or apiarian scenes. It also contains 3 bee-songs, namely, "The Hum of the Bees in the Apple-Tree Bloom," "Buckwheat Cakes and Honey," and an entirely new one, called, "The Bee-Keeper's Lullaby." This last song has not been published before. The songs alone ought to be worth more than the price of the whole thing.

It is a booklet that should by placed in the hands of everybody not familiar with the food value of honey, for its main object is to interest people in honey as a daily table article. It is thought that it will be just the thing to sell on railroad passenger trains, on news stands, etc. The stories and items are all so short and helpful, and the pictures so beautiful, that it likely will be kept by any one who is so fortunate as to get a copy of it. Its postpaid price is only 25 cents, but the health-value of its contents would run up into dollars. We mail 5 copies for $1.00, or club it with the American Bee Journal—both for $1 10. It would be very nice for a gift to a friend. Send us a six months' *new* subscription for the American Bee Journal with 50 cents, and we will mail you a copy of "The Honey-Money Stories" free as a premium.

Contributed Special Articles

Work in the Apiary for October

BY C. P. DADANT

THE honey crop is now entirely over, and all supers on the hives should be removed. Those combs that have been run through the extractor and returned to the hives for cleaning and repair would best be taken off before the end of the month. Cool mornings, when the bees have congregated in the brood-chamber, are best for this end. In warm days we would find those supers full of bees, and there would be quite a task to remove them. But it is better to delay the removal until late in the month, as we avoid the possible development of moth-eggs among the combs that are deprived of bees during the remaining warm days of fall.

The weak colonies must be again examined. If they have been helped during September with combs of brood and honey, they will be found quite populous. But such colonies as have not succeeded in getting a sufficient surplus, or those that are queenless or too weak in bees to go well through the winter, should be united either with stronger colonies, or added to one another.

It is sometimes possible to make one good colony out of two or three poor ones; one of them furnishing combs of honey, another bees, another a good queen. But there is always more or less danger of their fighting when united, unless it is done late, and the bees smoked very thoroughly before putting them together. We have often united colonies by bringing them slowly together, moving each hive a few inches every day, so they may not lose their bearings, and then uniting them some very cool morning by transferring the combs loaded with bees from one hive to the other. It is well to remove all combs but two or three, previous to this uniting, so that the bees may all be gathered in a bunch, and those combs may be removed in one handful and inserted in the other hive.

We always aim to remove from their hives those colonies that are queenless in preference to those that have a queen. A few puffs of smoke, and perhaps a little spraying with sweet-scented water, will help them to agree, if we are careful not to overdo this. Drone-laying workers, if there are any, are usually killed by the bees of the colony that has a queen.

At this time also we remove all dry combs from the body of the hives, and examine each colony to make sure of its winter stores. Feeding may be done to supply those that are short, but the very best way of supplying winter stores is by securing heavy combs from fat colonies that have something to spare, and inserting them in hives that are likely to be short. Care must be taken to place those combs where they will be easily accessible for the cluster. A comb heavy with honey, which is placed behind two or three dry combs and away from the cluster, will be rather a detriment than a help, as outside bees may find it and discover that it is not defended. As a rule, however, it is not advisable to feed and try to winter a colony that is not strong enough to defend its door.

The entrance is, of course, reduced to suit the needs of the colony. Some apiarists seem to consider this a needless precaution, because in a state of nature the bees have the same entrance to their "gum" in hot weather as in cold weather. But the bee-business is a business of details—we can expect more from our bees under domestication than in the natural state, simply because we aid them in small things, and if we did not do more for them than Nature does, many colonies would be allowed to starve that would give us good results the following year. Nature provides for all beings in a general way, but she gives us foresight that we may provide that in which she is lacking.

Sometimes, though rarely, hives are found which are so thoroughly filled with honey in the brood-chamber that there is no room for the queen to lay or for the bees to cluster. These hives will gain by the removal of some of their heaviest combs, and the replacing of them by combs that are filled only down to about a half to one-third of their depth with honey, these combs to be inserted in the middle of the cluster.

Although the bees must have honey in easy reach, a colony will not winter well on combs that are entirely filled. A colony in an ideal position has about half of each comb dry (the lower half), and the bees occupy this part. When you open a hive in the latter part of October, and the bees come to the entrance at once, but do not show at the tops of the combs, you may be sure that they are in good shape for winter. Yet there are populous colonies that cover every comb from top to bottom, and have a plentiful supply of honey. These are in exceptional circumstances. But a colony that does not occupy at least five spaces between combs may usually be considered as in danger of suffering if the winter is severe. Such colonies, if it is necessary to risk them, would better be wintered in the cellar. Nothing is done, however, towards winter-packing or cellar-wintering before November, in this latitude.

Hancock Co , Ill.

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Giant Bees of India—Stingless Bees—Wax-Moth

BY DR. E. F. PHILLIPS,

Acting in charge of Apiculture, Washington, D. C.

I HAVE read with interest the article by Prof. A. J. Cook, on page 631, on "Importation of Bees by Our Government." I quite agree with Prof. Cook in most that he says, but there are one or two things that I would like to correct.

In the first place, the scientific name of the giant bee of India is *Megapis dorsata*, and not Macroapis. The two words mean the same thing, but it is necessary to use the correct one. Since there is now considerable interest in this genus of bees, due to the fact that the Bureau of Entomology is trying to import them, I thought that you would be glad to have your attention called to this error.

In the fourth paragraph of the same article the generic name of our common bee is given as Aphis. This should, of course, be Apis, and it is evidently but a misprint. Some of your readers might wonder how a cross between stingless bees and plant-lice would help them.

Stingless Bees of South America.

I may also be pardoned if I say that the Department of Agriculture is not expecting to try to import the stingless bees of South America. In a very delightful talk which I had with Prof. Cook, I told him that there was a movement on foot on the part of some private individuals to get these bees, and evidently I did not make myself clear. I would be glad to see these bees tried in this country, for we can not try too many things for the good of apiculture, but I think I am safe in saying that the Department of Agriculture will not be the one to do this.

The Department Apiary, concerning which Prof. Cook writes so kindly, is always open for inspection, and it will be a pleasure for any of the force to show any of the readers of the American Bee Journal what we have here.

The Lesser Wax-Moth.

It has come to my notice that the lesser wax-moth—*Achroia grisella*—has been found in this country, and I am anxious to learn how widely it is distributed. I will appreciate it very much if any of the readers of the American Bee Journal who have any specimens of this moth in their apiaries will notify me of that fact, and send samples of either larvæ or adults. I will be glad to send on request a return frank to any person wishing to mail any specimens to me, which will make it unnecessary to pay postage. In order that this moth may be distinguished from the common wax-moth—*Galleria mellonella*—I will give a brief description :

The adult moths are little more than half the size of the common moth, and with wings spread measure about ⅝ inch. The fore wings are considerably darker than the hind, and a very characteristic feature is the swiftness of movement of the insects. The tunnels are similar to those of the common moth, but smaller in diameter, and the cocoon, at the end in which the pupa is found, is considerably smaller. Wherever found in America they are due to importations, since this is a European species.

Bee-keepers need not fear this moth any more than the larger one, for it is well known that there is one sure preventive for moths, and the rule of every bee-keeper, whether troubled by moths or not, should be, "Keep all colonies strong." This will of course not keep the moths away from stored combs.

There is an excellent illustration of both bee-moths in the "A B C of Bee Culture," page 54, but the name is misspelled in the text.

Washington, D. C.

Cleaning Up Unfinished Sections, Etc.

BY EDWIN BEVINS

THAT colony of strenuous bees I wrote about early in the season had completed about 120 sections of honey at the end of our short white honey-flow. At that time I removed all supers from the hive except the one next the brood-chamber. This had a few partly-filled sections in it. And thereby hangs a tale, or tail. Take your choice. The tale (or tail) is as follows:

When, a few days ago, I wanted some sections of sealed honey to fill up the last case needed to fill up a crate for shipment, I went to this super and thought I saw enough sealed sections to fill the case. I put a Porter bee-escape under and waited awhile for the bees to get out. When I went again the bees were not out, but the honey was. The bees had found a hole in one rear upper corner large enough for the passage of one or two bees at a time, and they had traveled out and in, and in and out, till they had put about all of the honey below. My first thought was that I must be one of the fool bee-keepers which Dr. Miller had occasion to mention not long ago. But there had been no robbing of the super by bees that did not belong to the hive.

I had in the honey-house a large number of supers filled with unfinished sections in all stages of development. I filled a super with the sections nearest completion, and put it on the hive with nothing between it and the brood-frames. Then I filled the robbed-out super with sections less complete, and put it on above the bee-escape, the passage to which was closed. A solid piece of board would have been just as good. Then the bees went on with their robbing. The work goes on so quietly that the other bees in the yard are not attracted. I get one, and sometimes two, supers cleaned out every 24 hours. I have added supers of sections below the escape till now there are three. The brood-chamber was, of course, filled in the early stages of the work, and the honey must now of necessity go into the supers.

Whether the sealing of the honey below the escape will come up to expectations I can not at present say, but as a means of getting unfinished sections cleaned out for future use, the experiment is a howling success. This one colony has cleaned out 12 or 15 supers full already.

Now don't all jump at once. If you do, somebody will get his foot in it. The situation with me was like this:

At the time when the early honey-flow came to a premature end I had three supers on most of the hives run for comb honey. Then I went to work and reduced the number to one super on each hive. I left this one for the comfort of the bees, and for them to fill with the fall flow. But I had a large number of incomplete sections on hand, which I knew I could not get completed this season. They were very much in the way. Attempts at robbing were frequent. I dared not put them out when the weather was so warm, and the dearth of honey in the flowers so great that the bees would not leave the hives. Then a short time ago there was a sudden change. The bees began to go freely to the fields, and gave but little attention to things around home. This change has afforded me an opportunity to dispose of my unfinished sections in the way indicated.

The foregoing is a sample of what the comb-honey producer is frequently called upon to do. At the prices which have prevailed for quite a while the work necessary to make a salable product has been done at a loss. I have long had a suspicion that bee-keepers generally are barking up a tree that has a very small-sized 'coon hidden in its foliage. But, notwithstanding the unremunerativeness of his pursuit, the pursuit is not likely to be abandoned. Bee-keeping is a part of the world's work, and somebody will be doing it. Those who are in can not lightly get out—and there will be recruits. When one's thoughts get to roaring beeward, the work of his hands will inevitably take the direction of the bee, just as, when the thoughts of Tennyson got to "roaring seaward," his footsteps took the direction of the sea.

There will, most likely, be some comb honey found in the markets when most of us are dead; but many of us in the meantime will not realize much more for the work of producing it beyond the satisfaction of contemplating the beauty and perfection of the product. I think that Mr. Heddon's idea is quite correct, that more persons have been beguiled into the pursuit than is for the welfare of the pursuit. I thought when writing the next above sentence that I would underscore the word "beguiled," but will leave that for the reader to do or not, as suits him. Decatur Co., Iowa.

Why Not send in some new subscriptions for the American Bee Journal? Samples free for the asking.

Convention Proceedings

Report of the Chicago-Northwestern Bee-Keepers' Convention, held at Chicago, Ill., Nov. 30 and Dec. 1, 1904

(Continued from page 665.)

REPORT OF THE INSPECTOR OF APIARIES.

Mr. Hutchinson—In all my experience with foul brood I have never cut the combs out, as you speak of. I either shake them on starters or full sheets of foundation, and I never had another case of foul brood come on. In other words, I haven't found it necessary to make that second shake.

Mr. Smith—That is according to the rules that are laid down by Mr. McEvoy. My experience has been the same as Mr. Hutchinson's.

Mr. Hutchinson—I wouldn't like to say it was never necessary, but I say in my experience I have not found it necessary.

Mr. Smith—I have not found any to develop the second time, unless it was taken from other infected colonies.

Mr. Kimmey—From your experience with infected brood, is it your opinion that you would find after the first transfer that that colony would be saved, whatever way it was treated?

Mr. Smith—Oh, yes, where it is done in the early part of the season; and it depends a good deal on the fall flow; but a great many of them have done well.

Mr. Kimmey—Would there be much loss in the first two weeks?

Mr. Smith—I believe you can gain by making the change and putting them on full sheets of foundation because the bees draw it out and you have a full sheet of workers and the queen will fill those new combs. They are not clogged with honey or pollen; and I have had a great many swarm within four weeks after being transferred.

Mr. Wheeler—I think there would be a great loss there right along this line. You people ought to be pretty careful when you go to work. We bee-keepers who are interested financially, and have all our money in the business, do not want to have the inspector come along that is careless in regard to our financial welfare, as well as the bees. Now if it is not absolutely necessary to allow those bees two weeks' time before you cut out the combs, we don't want to have to do it. In regard to this man asking if that colony is of any value, it certainly is of value. The colonies in the spring may show a little of that disease, and they want shaking out and may gather hundreds of pounds of comb honey in that season. And right there is where you people ought to be a little careful. We ought to have scientific investigation; we ought to have some definite knowledge to go by, and not be haphazard about it, and have a man come along and say two or three days or two weeks, it doesn't matter. We must understand what we are doing. It is a matter of thousands of dollars of importance to us.

Mr. Smith—I said two weeks. I said that is as long a period as I have known parties to let their bees remain and change them. But about four days is what I tell them. Leave those in till they have exhausted the honey, about four days, and then change them back onto other frames or foundation.

Mr. Wilcox—Wouldn't it be better to put them on empty frames than foundation?

Mr. Smith—I do, as a rule, but a great many men have starters of foundation in their frames, and they don't want to take the starters out.

Mr. Whitney—You said you found foul brood in this region along the west part of the State, and along the Indiana line. Do you conclude from that that foul brood is prevalent along water courses, or in damp, low locations, rather than dry?

Mr. Smith—I can't say as to that.

Mr. Whitney—It seems to me that it would be an index if you found it in that locality and not in the dry ones.

Mr. Smith—I found some counties along the Illinois

River from Peoria south until we get down to Pike county, where I have not heard of any foul brood. When you get down to Pike county there seems to be considerable of it.

Mr. Dadant—I think I have an answer to that question, whether foul brood will be produced in damp places. Colorado is about as dry a State as there is, and, I believe there is more foul brood to the thousand colonies there than there is in Illinois. California is a very dry State, and they have considerable foul brood. I think a great many colonies has more to do with foul brood than temperature or moisture. We find when things are congregated in large numbers there is more chance of disease; that cities have more disease than farms. In the production of crops a small vineyard will have very little of the black rot, but put them together and it will start somewhere and spread through the vineyard; and I believe you will find the same thing where large vineyards are, and where a number of bees are kept together. I believe that is the main secret of all the diseases. I would like to add with regard to foul brood, it is very difficult to say some things positively in regard to the treatment, as I believe there are different degrees of foul brood, as there are different diseases of the throat. Some foul brood is more malignant than others. Therefore you need more care, in which case the inspector has to judge as to how much care he should use. In regard to beeswax, I have never had foul brood at home. We have bees in the apiary where we have our comb foundation making. We get beeswax from all parts of the Union and foreign countries; our bees have access to the beeswax before it is melted. We find it difficult when we take in materials to have very close-fitting doors, so they are opened most of the time in the summer, and we have the bees in there a good part of the time; we have never had any foul brood from it. Therefore I conclude it is impossible for beeswax to give foul brood, and the reason is this: When beeswax is melted it soaks into whatever it touches. If you dip your finger in hot beeswax you find it very difficult to work it out, although the moisture in the body would be apt to throw it out. Take one of those foul-brood germs and soak it in beeswax, and you deaden it and render it absolutely harmless, and it surely could not reproduce itself.

Mr. Reynolds—Mr. Smith states that a swarm hived on foundation with a young queen is not as likely to have foul brood as the swarm shaken from a colony would be. Would it not answer the purpose, instead of keeping those bees so long on foundation, to catch the queen and prevent her from laying, as Mr. Smith says, and close the entrance for four days and they would consume the honey, no matter what the honey-flow would be?

Mr. Smith—That would be a very good idea, I think, to catch the old queen to keep her from laying. It takes a brood or an egg to develop, I think it is nine days until it comes into a fully-developed pupa—as we call it when it fills the cell ready to cap; that is the time that foul brood attacks the larva; and after the bees cap it, then it goes into the nymph state. I have never yet found any bees in that stage of growth or development that were affected with foul brood. It seems that the tissue of it gets so tough that the spores do not enter it.

Mr. Moore—One gentleman has raised the question as to the great damage that is likely to be done to a beekeeper by the inspector. I want to ask these people who have had experience in this matter, what is the probable profit from a colony of bees that has foul brood during the season, supposing they are run for honey? Never mind the question of getting rid of the disease, but what profit will you have from those diseased colonies through the season? And what is the damage to the honey crop by the legitimate treatment?

Mr. Root—If I might answer that question, from my own experience I would say, generally speaking, there would be no profit. If the colony could hold its own, if I allowed the disease to run and didn't do anything with it, it would be not a case of profit, but a case of profit and loss, with particular emphasis on the word "loss," with the chance of infecting the other colonies.

Mr. Reynolds—Some inspectors might be a little more partial with some than others. There is a point there to look at.

Mr. Snell—I would like to ask Mr. Smith if he has found any foul brood in the northwestern part of the State?

Mr. Smith—Yes, sir; in Whiteside county there is a good deal of it.

Mr. Wilcox—I want to get this clear to my own mind. I have never found foul brood in my apiary, and I hope I never will. I understand from all I have read of it that the disease is transmitted only through honey. Is that correct?

Mr. Dadant—I believe that is a mistake. Cheshire described foul brood as Bacillus alvei, and he found it even in the body of the queens. Now, of course, I couldn't answer for what Cheshire said, but he is one of the best authors on bee-culture. Cheshire was a scientific man, but he was not practical; he was not a man who produced honey. He found germs of foul brood in all parts of the hive. In cases where you cure it so readily I don't believe you have the true, dangerous foul brood. Therefore I think we should be very particular. I don't think we can go any too far. Where you cure it by simply transferring the bees, that is well. I don't think you should expect to do it in every instance. I believe there are dangerous cases where you will have to transfer the bees and destroy the combs, over and over again. I don't believe you should stand to the statement that foul brood is only in honey.

Mr. Root—Prof. Harrison gave a paper on that in the Canadian report in which he stated he had found the Bacillus alvei in the ovaries of the queen, as Cheshire has said. But I wish to say, in opposition to that, I have personally introduced queens from the worst colonies we have had, into healthy ones, time and time again, and never saw the disease carried in that way. I don't mean to say it cannot be done, though. But the experience so far as I know over the country has been to the effect that queens may be taken out of these diseased colonies and put into others, and the disease was not transmitted. Why that is so I don't know, but that is the practical result of it.

Mr. Dadant—Perhaps in this matter the scientific men are deceived by some circumstances. Now, where a man dissects a queen he evidently has to kill her, and those germs of Bacillus alvei are very difficult to produce. It may be a colony partly infected. When he examined the queen the germs have developed since the death of the queen, or in such a way that if the queen had been alive and well she would not have had any germs. At the same time, we must be very cautious and not assert. In this disease it is better to be over-cautious than insufficiently cautious. Therefore, I believe we should be very careful. In regard to boiling, I believe it is a mistake to say it will take three hours of boiling to destroy the germs. At the same time there are men who have found germs after three hours of boiling. It may be they got those germs in a short time after the boiling, before they made the examination, and I am inclined to believe that, because I think anything that is boiled in the matter of life will die. But in such a dangerous disease we must be very careful in asserting the danger does not exist under such and such circumstances. We may say it is not probable. As Mr. Root says he has not found it, therefore I would be inclined to think he is right, but at the same time we must be very careful not to assert the disease does not exist in all parts of the hive.

Dr. Miller—Calling attention to a point that might be misunderstood in what Mr. Dadant has said, the fact that the germs of foul brood may be found in the body of the queen, does it necessarily follow that the disease will be conveyed by that? It may be there without being conveyed. But going back to the point before: Will foul brood be carried in any other way than by the honey of the hive? If the germs be carried from a diseased colony, no matter what from, the disease may be conveyed to another hive. The germs are in the brood. Isn't it possible that that might be carried, sometimes, as well as the honey? I suppose it is true that the honey is the principal medium, and the usual medium, through which the disease is conveyed, but surely it is not the only medium. If the diseased part itself of the brood be in any way carried from one colony to another, that would surely carry the disease.

Mr. Wheeler—That is a good point the Doctor makes, and one that is very important. The bees are continually taking out that dead brood. I believe when the disease first starts they keep it all clean. I believe the hive for months is perfectly free of any signs of foul brood, and yet they have it and we don't know it. They keep carrying out every bit of foul matter and finally they have to give up in despair. All this time that foul brood has been carried on the bottom-board and after a while some of it is left. Now, the question is, Is the foul matter that is carried out infectious? That is something worth inquiring into. The question is whether we had better fumigate our hives and burn them out or not. Some say yes, and some say no. It is an important question.

(Continued next week.)

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

When Honey Had the Field.

The days that never will come back—and we don't want 'em to come back. But somehow we lick our lips at them still—the days when there was no sugar, and honey had the whole field to itself. Page 566.

Experiments as to Odors and Bees.

L. Forestier's verification of previous experiments as applied to bees is of interest. If not quite positive evidence that recognition is by smell, it weighs in that direction very decidedly. A bee wet in dilute alcohol and allowed to enter home at once is stopped by guards. Kept till the scent of alcohol is completely evaporated, it is recognized as a fellow citizen again. As one bee might die of loneliness and worry, take a dozen if you wish to repeat this. Page 567.

Tests for Paraffin in Beeswax.

So strong, hot lye eats up beeswax and makes a soap of it; but paraffin resists and remains paraffin still. I suppose a good-sized piece of the suspected foundation should be put in—kept hot for awhile—well stirred—then cooled. Then if anything solid or semi-solid appears, warm water will tell whether it is soap or paraffin. Manifestly this will not detect the tallow or rosin sometimes used by non-manufacturing rogues. If foundation was three-quarters beeswax and one-quarter paraffin, I wonder how a slip of it would look if bathed for awhile in lye at 135 degrees. Should expect it to look different from a slip of pure foundation. Page 568.

The French Wax-Kettle Method.

The French kettle, on page 583, may very likely be a good one; but when they back it to extract entirely all the wax from old combs they are asking us to believe rather too much. The essential operation, after all, differs but little, I should say, from that of other kettles. And possibly also the contents of a wax-kettle might be stirred properly in some more simple way than putting in the machinery of a flying machine to do it. The salt-water idea is probably very good. Just the salt, in and of itself, I don't know whether it would help or hinder the separation of wax. But it raises the boiling point of the fluid from 212 degrees to 230, and that is likely to be a decided advantage. But (there it is again!) those who scold gently about it injuring wax to boil at 212 degrees will howl at 230.

Finger-Nail Test for Tallow in Beeswax.

The finger-nail test for tallow in beeswax seems to be an excellent one. We never have to puzzle over the question what we did with our finger-nails when we used 'em last. Always on hand—in both senses of the term. The elasticity of the nail, and the stubbornness of pure wax combine to give a rippled appearance to the furrow we plow with a finger-nail. A smooth, unrippled furrow results when we plow in tallowed wax. Page 584.

Decline and Rise of Bee-Pasturage.

As to the decline of bee-pasturage, I think there is a slow movement of the flora to meet the bees half way. Once got along entirely without the honey-bee, now (in blind, groping way) recognizing the benefit of bee-visits, and preparing to pay for them. If the more desirable mints, and lupines, and veronicas are gradually exterminated, and the asters meantime gradually learn to yield honey, the net result may be in our favor. Page 587.

Good and Poor Bee-Countries.

Good bee-country, eh? And $50 of loss at one lick from melting in shadded hives. Thermometer 115 degrees—happy are they in poor bee-countries! Page 588.

Difficulties in Definite Descriptions of Bee-Races.

Dr. Bohrer seems to be making a reasonable demand about new races of bees—that they be described in definite terms as to general appearance. I suppose the main trouble is that the definite description of one colony fails to fit another colony whose claim to purity is just as good as the first. Worse than that, might you not describe a Caucasian colony definitely, and then somebody hunt up a pure Carniolan colony to fit the description quite well? Page 588.

Honey from Basswood Leaves.

The question about honey from basswood leaves brought out a decided negative. Only about 5 of the 29 experts ever saw bees work on basswood leaves at all; and none ever saw them get much at it. Page 598.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Uniting Weak and Queenless Colonies

However the sentiment of the sisters might incline them to the nursing along of a weak and queenless colony in the spring, when it might be better economy to break it up, there can be little question about such things in the fall. Yet one doesn't learn in a year, nor in several years, to steel one's heart ruthlessly to break up the family ties of a colony that has been tenderly watched over, thus making just one less the number of colonies in one's apiary. But if one would be a successful bee-keeper, the lesson must be learned, first or last, that it is not the number of hives with bees in that counts, so much as the number of bees that are in the hives.

Facilities for building up and strengthening are not the same in the fall as in spring. Brood does not abound in September or October as it does in May or June. In early summer it is an easy thing to find in populous colonies frames of well-matured brood which will produce 5000 bees or more. Two or three such frames of brood properly taken care of will of themselves make quite a little colony. But if you have never given the matter much attention, you will be surprised to find how scarce such frames of brood are at this time of the year. A search through a hundred colonies may not reveal one, whereas in the early part of the season more than one could have been found in every hive. So if you have a queenless weakling at this time of the year, throw sentiment to the winds, steel your heart against all tender emotions, and resolutely increase the chances of a larger number of bees next spring by lessening the number of tenanted hives now.

A frame of brood, or even a frame of honey, with its adhering bees, may be taken from one colony and given to another at any time of year, and there will be no fighting. If one weak colony is united with another, unless special precautions are taken, there will be fighting and slaughter. The fighting in the latter case will be all the worse if the uniting is done late.

With these principles in mind, the few cases of uniting that were needed among our bees were undertaken early, and they were made on the instalment plan. To-day, as it might be, a queenless colony, instead of being united as a whole with another colony, is parceled around among two or several colonies, a single frame with its bees being given to a weak colony, and two or more to one stronger. To-morrow another queenless colony will be broken up, distributed in the same manner, and as the weak colonies with good queens are thus becoming stronger each day, and thus competent to take care of larger accessions, only a few days are needed thus to distribute all the faulty colonies, and without the danger of any fighting.

Sweet, "Hivey" Mary

Mary had a swarm of bees,
And they, to save their lives,
Must go wherever Mary went—
'Cause Mary had the hives.
—*Selected.*

The above bright stanza was sent in by Miss Sadie A. Butts, a city bee-keeper in Cook Co., Ill., who has been very successful with her little back-yard apiary.

A City Office-Roof Apiary

Miss Emma V. Haggerty, who will be remembered as the lady who was so successful in passing the examination for the position of care-taker of the bees of the city of New York, but failed for lack of a political pull to get the place, might do good service just now in that city, in a case mentioned as follows in a daily newspaper:

Bee-Farm in Heart of Business District.

"If one were asked what is the thing he would be least likely to find in the heart of the business center of New York and replied that it would be a bee-farm, he would consider himself absolutely safe. But on the roof of an office building in Vesey street there was discovered to-day a full-fledged apiary. Not only are many thousands of bees contentedly swarming in their unusual surroundings, but they are storing away many pounds of honey stolen from several candy factories in the vicinity. The bees' happiness, however, may be short-lived. Complaint has been made of them as a public nuisance by the proprietor of one of the candy factories."

Miss Haggerty would no doubt suggest that it would be a simple thing to screen out the bees. Indeed, were no bees within a thousand miles, the screens would be needed to keep out the flies, for New York is by no means a flyless city. Consumers of candy would no doubt prefer to eat confections that had been visited by the cleanly bees to using that which had been swarmed over by the filthy flies.

If the candy-makers have a grievance against the bee-keepers, the bee-keepers have equally a grievance against the candy-makers for exposing their sweets, especially if as poisonous as some candies are said to be.

Comb Honey Not Machine-Made.—We have a fair supply of the typewritten letter on this subject, which appeared in the Chicago Daily News of June 21, 1905. It is just the thing to have published in every bee-keeper's local newspaper. We mail it for a 2-cent stamp. Better order several copies, and request as many newspaper editors to publish it. It will certainly be a good thing for both the reading public and the bee-keepers.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to Dr. C. C. Miller, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Cleaning Out Partly-Filled Sections —Hive-Covers in Winter

1 have a number of sections with a little honey in them that I want to use next year for bait-sections. I can not very well follow your plan without my neighbors' bees getting most of the honey. Can I put the sections over the frames and let the bees clean them out, without danger of starting robbing?

2. Do you leave the hive-covers on when wintering in the cellar, or use canvas or something of that nature? Minnesota.

Answers.—1. Yes, not a bit of danger from robbing unless some crack is left so the bees can get into the supers from the outside. The only trouble is that it is hard to get the bees to make a clean job of it. Sometimes, especially if they have plenty of stores in the brood-chamber, they seem to think the honey couldn't be in any better place than in the sections, and utterly refuse to move it. Exchanging full frames in the brood-chamber for empty ones may make them change their minds. Some say they succeed by having a burlap or other cover over the brood-frames, with one corner turned back so the bees have only a small passage; but that has not succeeded very well with me. In any case it will be well for you to allow the bees a chance at the sections off the hives, after they are mainly emptied.

2. They are carried into the cellar, covers and all, just as they were on the summer stands.

Weight of Colony for Wintering

1. What should a 10-frame colony of bees weigh, ready for wintering?

2. If it has full frames of honey should they be placed in the center of the hive? The frames in the center are only partly full of honey. New York.

Answers.—That depends. The kind of hive makes a difference, some being heavier than others; covers and bottoms also differing. Find out as nearly as you can what a hive filled with empty combs weighs. Then try to have each hive with its bees and other contents weigh 40 pounds more than the empty hive and combs. Understand that doesn't mean that there will be 40 pounds of stores present, for the weight of the bees and pollen is counted in. For cellaring, 5 or 10 pounds less will do; but you're more likely to do harm by too little than by too much.

2. The bees know better than you how to arrange their stores, and you can safely leave that matter in their hands, your part being to make sure that they have not only plenty of stores, but abundant stores.

Is It Foul Brood?

What is the matter with my bees? Soon after the white honey-flow the young brood began to turn a light brown and to die. They went in all stages of the brood until they were capped over. A few died after being capped, and would have a sunken appearance, but no greasy appearance around the small hole. Some of the brood would turn up Chinaman-shoe fashion, but would never stick to the walls of the cell. Nor could I get it to be ropy by sticking a pin or toothpick in it.

Our honey harvest has been a failure. So after I saw the brood in the fix it was, I began to feed, then the young larvæ did not die, till I could see the eyes; then the bees would build out over it as though they were going to start queen-cells. They would build the cell about $\frac{1}{8}$ of an inch and leave it open. I sent a sample to the State bee-inspector, who pronounced it foul brood, but it will not cure by the Baldridge plan nor by the McEvoy plan, as I took one of my worst colonies, shook it out on starters, left it for 48 hours, then shook it on full sheets of foundation, and as soon as the brood got so I could see the eyes it turned brown and died.

I tried one colony with the Baldridge plan, then after it began to rear brood I shook it out on full sheets of foundation. After I began to feed the trouble decreased considerably. Whatever it is, it is general all over this locality.

How would it do to extract all the honey and feed sugar syrup with naphthol beta in it? Illinois.

Answer.—I should have more faith in the inspector's judgment than my own, for he has seen hundreds of cases to my one, and is familiar with the disease; but it might be no harm to send a sample to N. E. France, Platteville, Wis., General Manager of the National Bee-Keepers' Association, if you are a member of that organization, and if you are not, send him a dollar to make you a member.

The symptoms of the disease may not always be exactly alike, and neither is it proof that foul brood is not present because the usual treatment has not proved successful. If the trouble is general all over your locality, there is a chance for a colony to get the disease afresh, even during treatment.

It might not be a bad thing to try the syrup with naphthol beta, but in any case the disease will be at a stand-still through the winter, and it might be about as well to wait till next year and then vigorously apply the McEvoy treatment. Even if the disease is not foul brood, that same treatment is all right for those diseases that somewhat resemble foul brood.

Queenless Colony and Drone-Killing

Will a colony of bees kill the drones in the fall if they are queenless? Maine.

Answer.—I think not.

Building for Wintering Bees—Bee-Feed for Winter

1. I think of building a place to winter my bees in the coming winter, and would like to have your opinion on my idea. As I am going to put it along the side of my honey-house, I will have to make it high enough to accommodate two tiers of hives. After putting the first tier on the bottom, I will put a super on each hive filled with chaff. The next tier will set on top of these supers, and will also be supplied with supers filled with chaff. Over all of this I will put chaff, also behind and in front, but will arrange some way to keep the chaff from blocking the entrance and preventing the bees from flying. Do you think, if each 8-frame hive weighs 45 pounds, that this method will be successful?

2. I made a nucleus this summer. It is in a shallow extracting super (8-frame). If this is full of honey should it winter all right, or would it be better to put on another story and feed it full of syrup? The nucleus seems very strong and completely fills the shallow hive.

3. I made some syrup for feeding by mixing sugar with cold water, equal parts by measure. Will this be all right? Ontario.

Answers.—1. Something depends upon the weight of the hives, bottom-boards, etc. If of the same weight as mine, 50 pounds would be safer.

2. If the shallow frames are of the usual depth, something like 6 inches, and the combs are solid with honey, there ought to be no need of further feeding. But with combs solid with honey there should be plenty of room for the bees to cluster below the bottom-bars. This you can give by putting under the hive a frame perhaps 2 inches deep.

3. That's all right for early feeding, so that the bees have plenty of time to evaporate and ripen it. But the later it grows the heavier the syrup should be; and when fed so late that bees are not expected to evaporate it, there should be about 5 pounds of sugar to each quart of water.

Keeping Drawn Sections Over—Hiving Swarms on Full Drawn Combs or on Foundation

1. Is it possible to keep the combs built in sections this year and not filled so that they will be as good as new for use next year? If so, how? I have trouble about their turning a straw color.

2. Is it best to hive a swarm on full-drawn empty combs, or would you cut them out and put in foundation or starters when running for comb honey? I have used the full combs the past two years, and the result has been that in many cases the bees filled up the brood-nest pretty soon, and then swarmed again. Ohio.

Answers.—1. I've studied over your question quite a little, and am not entirely sure whether you mean the sections turn a straw color while on the hive or after you take them off. If while on the hive, then it is probably because the bees varnish them with propolis, which they do increasingly as the season advances, and the less honey they are storing the more propolis they seem to put on the sections. The remedy is to take off sections when the bees are storing nothing; even if you put them on for a later flow, and especially not to keep sections on after the last flow is over. If you mean that the combs turn straw color after you take them off the hive, then I don't know what the trouble is. I never knew change in the color of foundation or comb in sections, unless it were a slight bleaching out to a lighter color. All I do with mine is to keep them in a dry place, and I have no trouble.

Possibly I haven't understood your question aright, and if not I'll be glad to try again.

2. I think I should generally prefer the drawn combs, but I doubt about it in the case you mention. If it leads to swarming again in a short time, or even in a rather long time, and if such swarming does not take place with foundation, then I should prefer the foundation. Before swinging clear over, however, it may be worth while for you to do some experimenting. Under conditions as nearly alike as you can make them, try a number of colonies with full combs, a like number with foundation only, and to another like number give hives half filled with foundation, and filled up 10 days or so later with full-drawn combs. By this last is meant that a 10-frame hive would receive 5 frames of foundation at the time of hiving swarm, and 10 days or so later 5 frames of combs. Then you can see which lot works best.

Comb Honey Guarantee Circulars.—These were gotten up by The Honey-Producers' League, to be put into shipping-cases before nailing them up for market. They are mailed for only 10 cents for 50—practically cost price. Every bee-keeper who has any honey to sell by the case should use these circulars. They will help to inspire confidence in the genuineness of comb honey. Send all orders to this office.

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Maeterlinck's "Life of the Bee."—We have a few copies of this book, price, postpaid, $1.40; or with the American Bee Journal one year—both for $2.00, as long as the books last. It is a cloth-bound book, and has 427 pages.

Reports and Experiences

Early Honey-Flow Good

About 6 weeks ago I got an Italian queen, introduced her according to directions, and now I notice about one-half the colony is as fine a colored lot of bees as I have ever seen.

In June we had a couple weeks of good honey-flow, but since that time there hasn't been any honey coming in—not enough for wintering. The light colonies will have to be fed for winter. W. H. ELLIS.

Calhoun Co., Iowa, Sept. 18.

Colony Killing Off Bees

A year ago I lost 8 colonies out of 10, and last winter I lost 4 colonies out of 6. I was so discouraged I wanted to give up. I have 3 now, but something is wrong with one of them. It is a strong colony, but the bees are killing about a quart of bees a day. As soon as they are dead they turn black. What can be the cause of this? Are they robbers, or is it some disease? I closed the entrance to about 2 inches, and they are working now.

A swarm that issued June 18 has filled a 10x14-inch frame hive and 63 sections. How is that for a wet summer? A. A. WHITTON.

Lycoming Co., Pa., Aug. 31.

[It may be robbers, or it may be that a weak swarm has entered and the bees of the colony are killing the intruders.

The work of that swarm of June 18 is not bad for any summer.—EDITOR.]

Season Hard on Bee-Keepers

This has been the most injurious season to bee-keeping that I can remember. Beginning with a cold, rainy spring, and heavy rains continuing in June, July and August, with but few intervals, it was difficult for the bees to gather much surplus honey.

Last year at this time I had extracted 10,500 pounds, and now up to this date I have extracted only 3300 pounds.

Often the bees were compelled to eat instead of gathering honey, and in many instances, especially with nuclei, I was compelled to feed with comb honey from extra-strong colonies, and extracted honey in Doolittle feeders.

The last 10 days have been clear, with the exception of one shower, and the bees are beginning to store surplus honey. Two-pound sections put on June 15 are just being filled, but none are capped over. A neighbor was anxious in regard to his bees, as he found some of the larvæ dying, and on examination I found it the result of starvation. He immediately resorted to feeding, and averted any further loss. O. M. BLANTON.

Washington Co., Miss., Sept. 5.

Honey Crop in Southern California

I saw the statement recently (in the American Bee Journal I think, made by those who make it a business to know) that the honey crop of Southern California this year would be only about 1/[illegible]. In this section that estimate will hold good, not because we did not have the honey, but because we did not have the bees to gather it.

Last year's drouth was the most disastrous to bees of any season for many years. Last spring it was my business to see every resident in a territory that would average 20 miles square, in which there were many bee-keepers. I found only 2 bee-keepers whose losses were as low as 20 percent. If I remember correctly the next lowest was about 40 percent. Most of the losses were around 75 percent, and some 90 and 95 percent. Those bee-keepers having less than 10 or 12 colonies and who allowed their bees to provide for themselves, I did not count where all were lost.

Like a good many others, I did not begin to feed soon enough, but another time under like circumstances I think I could feed more effectively, although I saved 19 out of about 70 colonies, all healthy, but not strong.

Our season opened about 6 weeks late, and while I tried to get a few days at home each week to look after the bees, when I did all I could to control swarming, I lost 15 or 16 of the first swarms, which, at that stage, was a serious loss.

The bees did not get strong enough to do effective storing until the black sage—from which we get our nicest and best honey—was well past its best. About June 1, however, they were over their swarming-fever, and I began to have bushels of bees. The way they scooped in the honey would make a man's eyes stick out. I could not always keep ahead of them in filling frames with foundation. This kept up until about the last of July on white sage, wild buckwheat, sumac, and towards the last tar-weed. This last does not make very nice honey, but it feeds the bees.

I have now 100 colonies, all in fine condition (except one through an accident). I think they have plenty of honey to carry them through until next year. Some of the later colonies I may have to even up a little, but there is plenty of honey elsewhere to do it. Besides, I have put away over 200 good, fat frames of honey to use wherever they will do me the most good. If there is any honey in the fields next year I hope to have the bees to gather it.

The bees are still gathering a little honey from the very last of wild buckwheat, a species of goldenrod and sugar-gum. I wish I had thousands of these trees where I have one now. I think they must equal your basswood, not in quality, perhaps, but in quantity. The bees keep up a perfect roar on them, and if they are close to the house you would have to be a most uncommonly sound sleeper if their noise did not arouse you before it was fairly light. Near the trees the air is filled with the odor from the blossoms, and the white blossoms are fairly black with bees, and the bloom keeping up for weeks.

Three years ago this fall the greater part of the pasture upon which I depend (several square miles 75 percent black sage, 20 percent white sage and sumac) was burned off as bare as a street, since when we have had only one really good growing year, so that the black sage, a naturally slow grower, has been more than usually slow. I have just discovered, however, that if given favorable conditions it grows quite rapidly. Black sage must be several years old before it blooms much. An abundance of rain next winter would give me considerable pasture in this burned district. A. J. BURNS.

San Diego Co., Calif., Sept. 1.

Poor Season for Honey

This has been a very poor season for honey in this locality. The prospects were good in early spring, but the drouth during June killed the white clover and cut the crop short. We have but very little basswood in this locality, consequently the crop does not amount to much from that source. We have had so much rain since the drouth was broken that we will get very little, if any, fall honey. We can only hope for a better crop next season. H. M. GARNER.

Miller Co., Mo., Sept. 2.

Two Good Seasons—Briar-Berry

We have had two very good honey-years. I had 52 colonies last year and secured 2600 pounds of honey, and this year with the same number of colonies I secured 1700 pounds.

We have had some trouble here with the bees sucking briar-berries. They come into bloom just as the gallberry bloom gives out, and the bees put the briar-berry juice around the edges of the white honey, which makes the sections look as though they were in mourning—the black juice around the white honey.

Last year was the best honey season we have ever had in this country. One trouble with us is that we have too much rain in the honey season. S. B. SINGLETARY.

Thomas Co., Ga., Sept. 4.

White Clover a Failure

The white clover honey was a complete failure in this locality, and I think in Missouri—lots of bloom but no nectar. Buckwheat and Spanish-needle are in bloom, but it rains almost daily, so we will get no fall crop. My customers are after me for honey. A. E. PATTEN.

Lawrence Co., Mo., Sept. 15.

FOR SALE HONEY-JARS

The No. 25 Honey-Jar, Porcelain Cover, Metal Screw Cap, absolutely tight, holding One Pound of Honey, Net, in shipping-cases of one gross each:
1 gross lots............$4 50 per gross
5 " " .... 4.00 "
Also in strong RE-SHIPPING CASES of two dozen each, heavy corrugated partitions, sides, top and bottom—a perfect protection—
1 case lots ....$1.00 per case
5 " .... .95 "
10 " .... .90 "
Eight-ounce Tumblers, tin caps, 3 dozen in re-shipping case:
5 case lots, per case, 3 doz........85c
10 " " " 80c
20 " " " 75c
F.O.B. New York. Prompt shipment on receipt of order.

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Choice home-bred and imported stock. All queens reared in full colonies.
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Safe arrival guaranteed. For prices on quantities and description of each grade of Queens, send for free price-list. 100 or 200 lbs. of Brood Foundation. Send for sample and prices. J. L. STRONG.
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We are accumulating quite a stock of engravings that have been used in the American Bee Journal. No doubt many of them could be used again by bee-keepers in their local newspapers, on their stationery, or in other ways. Also, if we can sell some of them it would help us to pay for others that we are constantly having made and using in our columns. If there is any of our engravings that any one would like to have, just let us know and we will quote a very low price, postpaid. Address,
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We can ship by return freight at the following prices:

½-lb. Jars with corks—1 case of 21 doz. for $5.50; 3 cases, $15.50.

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We have for sale a 6-inch and a 10-inch Second-Hand Comb Foundation Mill. Used scarcely any; good as new. If interested write for prices.

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OTISVILLE, PA., Jan. 18, 1904.

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Minnesota-Wisconsin.—The annual meeting of the Southeastern Minnesota and Western Wisconsin Bee-Keepers' Association will be held at the County Commissioners' Rooms in the Court House at Winona, Minn., on Oct. 24 and 25, 1905, at 10 a.m. of each day. All bee-keepers invited with their wives, and help to make the convention a success.
JOSEPH M. REITZ, Sec.
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VIRGINIA QUEENS Italian Queens secured by a cross, and years of careful selection from red-clover queens and superior stock obtained from W. Z. Hutchinson. Untested queens, 75c; after June 15, 60c; tested queens, $1.00; after June 15, 75c; selected tested queens, $1 25; after June 15, $1.00. Write postal card for circular. CHAS. KOEPPEN,
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Descriptive circular free. I am now filling orders **by return mail,** and shall probably be able to do so until the close of the season.

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Owing to the great demand for my TENNESSEE QUEENS for several seasons, and the quantity of standing orders from old customers, I decided not to advertise until my books were cleared of orders, and thus avoid disappointing customers.

I am now ready to fill orders by **RETURN MAIL.** Breeders used: Imported dark leather-colored Italian; my selections from light imported Italian; Moore's long-tongue; golden; Carniolan (mated to Carniolan drones in distant yard, and to Italian drones); imported Caucasian (lately received, mated for the present to Carniolan and Italian drones).

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As has been our custom heretofore we offer to mail a fine Standard-Bred Untested Italian Queen to the person who complies with the following conditions, all of which must be strictly followed:

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We think we have made the foregoing sufficiently plain so that no error need be made. Our Premium Queens are too valuable to throw away—they must be **earned** in a legitimate way. They are worth working for.

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Until further notice, finest quality new crop California Water White White Sage and Light Amber **HONEY** in 60-lb. tins, 2 in a case; new cans and new cases Write for prices and samples, and state quantity you want.

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SEPTEMBER

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Office and Salesrooms, 2146-48 Central Ave. Warehouses. Freeman and Central Aves.

Honey and Beeswax

CHICAGO, Aug. 18 —The demand has absorbed all the offerings of fancy and A No. 1 grades of white comb honey at 14c, while No. 1 has sold at 13@13½c. No call at present for other than the best grade, it really being difficult to place what ordinarily is called No. 1. Extracted, white. 6@7c; amber. light and dark, 5@6c. Beeswax, 28c. R. A. BURNETT & CO.

KANSAS CITY, Aug. 24.—The honey market here shows a decided improvement and the market is firm at $2.85 to $3.00 for No. 1 and fancy white comb in 24 section cases. Amber and other grades are selling for less, according to quality. Extracted in fair demand, white selling at 6½ cents; other grades down to 4½c. Beeswax, 28c. C. C. CLEMONS & CO.

CINCINNATI, O., Sept. 8 —It appears by this time, that comb honey will not be so plentiful. In some parts of the West the crop has been more or less a failure. Prices so far have not changed much yet. Fancy white comb, 13@15c. Extracted seems to be more plentiful. In barrels, light amber, 5¼@5½c; in cans, ½c more; white clover from 7@8c. Beeswax, 26c.
C. H. W. WEBER.

INDIANAPOLIS, Sept. 2 —There is a good demand for strictly fancy white comb honey, demand and supply running about even. Demand for lower grades of comb honey not good. Numerous shipments of honey arriving, but no one producer seems to have very great quantities to offer. I quote fancy white at 14@15c; No. 1 in poor demand at 12c, and amber dull at 10c. Best grade extracted brings 8@9c in 60-lb. cans; amber slow at 5c. Beeswax, 28@30c.
WALTER S. POUDER.

NEW YORK, Sept. 7.—New crop of comb honey is now arriving in a small way and fancy stock finds ready sale at 14@15c per pound; No. 1, at 12@13c, and amber at 11c No buckwheat on the market as yet. Extracted in good demand, and we quote California at 6@7½c per pound, according to quality; Southern at from 55@65c per gallon; white clover at 6½@7c per pound. Beeswax steady at 29c per pound.
HILDRETH & SEGELKEN

TOLEDO, Aug. 18—The market on comb honey at this writing is practically the same as last; however, honey is being offered quite freely, and this has a tendency to decline the price. On account of the heavy receipts of fruit there is no great demand for either comb or extracted at present. Fancy white clover in a retail way brings 15c; No. 1, 14c; little demand for amber. Extracted, white clover, in barrels, 6@6½c; in cans, 7@7½c: amber in barrels, 5@5¼c; in cans, 6@6½c. Beeswax, 28@30c. GRIGGS BROS.

CINCINNATI, Sept. 7.—There is little to report since our quotation two weeks ago. The supply of both comb and extracted honey is fair, and the demand is good. We offer extracted honey as follows: Amber, in barrels and cans, at 5¾@6½c, respectively. White clover at 7@8½c. Fancy white comb honey at 12@15c. Beeswax, 29 cents. THE FRED W. MUTH CO.

PHILADELPHIA, Sept. 21.—There seems to be an unusually large quantity of comb honey offered in the market at this time and prices for new goods are somewhat weak. We find small lots of bee-keepers in the vicinity offering it at 'most any price, regardless of the actual value. Honey has been sold in Philadelphia at the following prices during the week: Fancy, 13@16c; No. 1, 11@14c. Extracted, amber, 5½@6½ cents; white clover, 6½@8c. Beeswax, firm, 28c.
We are producers of honey and do not handle on commission. WM. A. SELSER.

ALBANY, N. Y., Sept. 18.—Honey demand sharpening some as cooler weather prevails, We quote fancy white, 15 cents; A No. 1 white, 14@15c; No. 1 white, 14c; mixed, 13c. Buckwheat, extra, 13c; fair, 12@13c Extracted, buckwheat, 6@6½ cents; amber, 6@6½c; white-7@7½c. Beeswax, 28@32c. H. R. WRIGHT.

SAN FRANCISCO, Sept. 13.—White comb. 1-lb-sections, 9@10 cents; amber, 7 8c. Extracted, water-white, 4¾@5c; white, 4½@4¾c; light amber, 3¾@4 cents; amber, 3@3½c; dark amber, 2½@3c. Beeswax, good to choice, light, 25@26c.
San Francisco jobbers say that there is no material improvement in the honey market here owing to the fact that apiarists are still asking above the figure at which business can be done here. The quotations above represent the prices which San Francisco dealers are willing to pay for the various grades delivered. It is reported that Colorado will produce about ¼ of the average yield of honey this year, and that Colorado buyers are already in the southern part of California buying several carloads of comb honey for shipment into the Middle West. An estimate of the yield for southern California for this year, emanating from the California National Honey Producers' Association, says that the output will approximate 175 carloads. Last year's crop was practically nothing and the prospects are for higher prices.

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MASSACHUSETTS
AGRICULTURAL

APIARY OF J. M. BUTLER, OF CLINTON CO., IOWA, IN CHERRY BLOOM.
(See page 694)

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY

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334 Dearborn Street, Chicago, Ill.

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(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

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DITTMER'S FOUNDATION IS THE BEST

Now is the time to prepare for next season.

If You Want to Save Money on Foundation, Working Wax for Cash, and on a full line of SUPPLIES, write for prices and discounts, and samples of our Superior Foundation.

E. Grainger & Co., Toronto, Ont., Agents for Canada.
The Bee and Honey Co., Beeville, Tex., Agents for Texas.

GUS. DITTMER, - Augusta, Wis.
Mention Bee Journal when writing.

IT'S TIME TO FEED

Feeding time is here and you will want feeders. There are none better made than the Miller-Boardman Entrance Division-Board Feeder and the Simplicity Bottom-Board Feeder. They can be attached to the bottom-board and left all the year around. Are made on honor and sold direct from the factory to you, saving you a middleman's profit.

Your orders will receive prompt attention. Send them early.

Don't fail to send us your address for our new catalog, which will be very comprehensive, and will give you many valuable pointers upon bee-keeping.

JOHN DOLL & SON,
Power Building, - - MINNEAPOLIS, MINN.

Please mention Bee Journal when writing.

9 Percent Discount ON ORDERS FOR accompanied by cash sent us in **Lewis' Bee-Supplies**

OCTOBER. This applies to all goods excepting Honey-Packages for current use. BY RETURN FREIGHT OR EXPRESS. Send to

H. M. ARND, Mgr.
YORK HONEY AND BEE SUPPLY CO. (Not Inc).
141 & 143 Ontario Street, CHICAGO, ILL.
(5 short blocks north of the C. & N. W. Ry. Passenger Station, using the Wells St. Cable Line from center of city to Ontario St.)
Long Distance Telephone—North 1559

Catalog and prices on Honey on application. If you want **Good Goods at Factory Prices and Prompt Shipment,** send your orders, or call on us.

BEESWAX WANTED—26c cash, or 28c when taking Bee-Supplies in exchange—delivered here.

Please Mention the American Bee Journal when writing Advertisers

"DADANT'S FOUNDATION"

—AND—

BEE-SUPPLIES

Revised Prices on Foundation

NAME OF GRADE	IN LOTS OF 1-lb.	5-lbs.	10-lbs.	25 lbs.	50 lbs.
Medium Brood	.55	.53	.51	.49	.48
Light Brood	.57	.55	.53	.51	.50
Thin Surplus	.62	.60	.58	.56	.55
Extra Thin Surplus	.65	.63	.61	.59	.58

DISCOUNTS for Early Cash Orders

During	September	10 percent
"	October	9 "
"	November	8 "
"	December	7 "
"	January	6 "
"	February	4 "
"	March	2 "

Beeswax Wanted at all Times.

DADANT & SONS, Hamilton, Ill.

WANTED

FANCY COMB HONEY IN NO-DRIP SHIPPING CASES, ALSO EXTRACTED HONEY. IF YOU HAVE ANY TO OFFER, QUOTE US YOUR ROCK BOTTOM CASH PRICE DELIVERED HERE, AND MAIL US A SMALL SAMPLE OF THE EXTRACTED HONEY. WE BUY EVERY TIME THE PRICE IS RIGHT, AND REMIT PROMPTLY.

THE FRED W. MUTH CO.

No. 51 WALNUT STREET, CINCINNATI, OHIO.

DEATH TO LICE.

LOSS BY LICE

on poultry amounts to many times the cost of **Lambert's Death to Lice**—the sure preventive. Loss can be saved and profit made by its use. Frees sitting hens from lice without harming eggs or chicks. A trial 10c box will prove it. 100 oz., by express, $1.00.

O. K. STOCK FOOD CO.,
D. J. Lambert, Vice-Pres.
406 Monon Bldg., Chicago, Ill.

Bee-Supplies!

We carry a large stock and greatest variety of everything needed in the Apiary, assuring best goods at lowest prices, and prompt shipments. We want every bee-keeper to have our **Free Illustrated Catalog**, and read description of Alternating Hives, Massie Hives, etc. **Write at once for Catalog**, either English or German language.

KRETCHMER MFG. CO., Red Oak, Iowa.

—AGENCIES—

Trester Supply Co., Lincoln, Neb.
Shugart & Ouren, Council Bluffs, Iowa.
Fulton & Ford, Garden City, Kansas.
I. H. Myers, Lamar, Colo.
Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex.

Get New Subscribers

Why not get a New Subscriber for the American Bee Journal, to send with your own renewal?

Bee-Keepers' Early Discounts

Now is the Time to send in your order for goods for use next season, and for all orders where cash accompanies we allow the following discounts:

Before October 1	deduct	10 percent
" November 1	"	9 "
" December 1	"	8 "
" January 1	"	7 "
" February 1	"	6 "
" March 1	"	4 "
" April 1	"	2 "

Freight-Rates from Toledo are the lowest. Can take Honey and Beeswax in exchange for Supplies if you desire. Send for free illustrated Catalog. It describes and illustrates everything for both the Poultry and Bee Keepers.

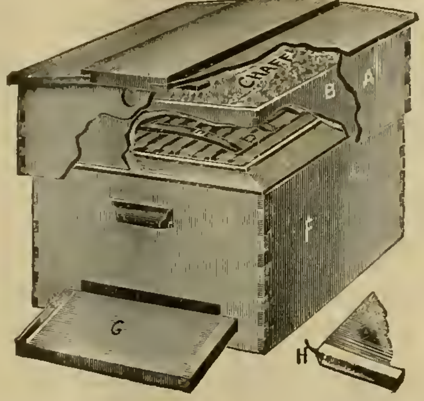
GRIGGS BROS,
521 Monroe Street,
TOLEDO, - OHIO.

Mention Bee Journal when writing.

WINTER IS COMING

Are Your Bees in Good Condition?

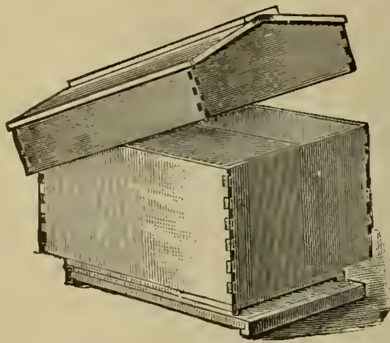
Outdoor Wintering is the Safest for the Majority of Bee-Keepers



Dovetailed Chaff Hive

This is one of the very best hives we sell; and for wintering bees, or for the production of comb honey, we do not know of anything better.

A good many suppose that double-walled hives are useful only for winter; but in localities subject to cool nights and a very hot burning sun during the middle of the day, they are none too warm for comb honey. Some of the best bee-keepers of the country are beginning to learn that such a hive, having well-protected supers, produces not only more, but a better-filled comb honey. Our dovetailed chaff has 2 inches between the walls, and when packed with chaff, sawdust, planer-shavings, or any loose material, makes a very warm brood-nest. The water-table, or picture-frame-like rim, covering the inner and outer walls, permits the use of the same supers that are used in the single-walled hives. When these supers are put on this hive and then covered with its warm, telescopic cover, the bees are in position to store comb honey as they can not do in supers not so protected.



Dovetailed Winter Case

There are those who, having single-walled hives desire something which, at a slight additional expense, will convert their hives into double-walled abodes for bees during the winter. Again, some others who winter in-doors wish something cheap and serviceable in the way of a protection to put over the hives after they are set out in the spring. To supply such we are prepared to furnish an outside case having the same cover and the same outside shell as go with the chaff hive described here. These are set over the 8-frame hive, and the opening at the bottom of the case (that is, the space between the hive inside and the case) is stopped up with the padded sticks. Packing material is poured in the space, after which a cushion or tray is put on top of the frames, and the cover set over the whole. This arrangement as a whole has given the best of results.

These are large enough to go over 10-frame Dovetailed and Simplicity hives, allowing only ⅜-inch space on each side

See prices of both 8 and 10 frame sizes in bottom line of table below.

Table of Prices of Dovetailed Chaff Hives	Designating Letter	Nailed and Painted	EIGHT-FRAME KD IN FLAT PRICE IN LOTS OF				Weight of Ten	Nailed and Painted	TEN FRAME KD IN FLAT PRICE IN LOTS OF				Weight of Ten
			1	5	10	25			1	5	10	25	
1-story Chaff Hive, no super or upper story, with tel. and super cover and chaff-tray.													
Without foundation starters	YW5	3 25	2 70	12 25	23 00	54 50	400	3 50	2 80	12 75	24 10	57 00	410
With foundation for 1-inch starters	YW6	3 45	2 80	12 50	23 50	55 75	400	3 60	2 90	13 00	24 60	58 25	410
1½-story Chaff Hive for comb honey without sections or foundation starters													
For 4¼x4¼x1⅞ beeway sections	YW52S	4 00	3 20	14 50	27 00	63 75	470	4 15	3 35	15 25	28 50	67 50	490
For 4¼x4¼x1½ plain sections	YW52P						460						480
For 4x5x1⅜ plain sections, in D. super	YW52M	4 15	3 35	15 25	28 50	67 50	490	4 30	3 50	16 00	30 00	71 25	525
Same with sections and foundation starters													
With 4¼x4¼x1⅞ beeway sections	YW64S	4 40	3 50	15 75	29 50	69 50	480	4 55	3 65	16 50	31 00	73 25	515
With 4¼x4¼x1½ plain sections	YW64P						470						505
With 4x5x1⅜ plain sections, in D. super	YW64M	4 55	3 65	16 50	31 00	73 25	510	4 70	3 80	17 25	32 50	77 50	550
Winter-case body with padded sticks	Z	75	60	2 75	5 00	12 00	80	80	62	2 85	5 20	12 25	85
Winter-case with 7-inch cover complete	YZ	1 50	1 20	5 50	10 00	24 00	180	1 60	1 25	6 75	10 50	25 00	190

Complete prices and descriptions in general Catalog. Ask for it.

9 Percent Discount for October Cash Orders

The A. I. Root Company, MEDINA, OHIO

BRANCHES

Chicago, 144 E. Erie St. Philadelphia, 10 Vine St. New York, 44 Vesey St.

ESTABLISHED IN 1861

THE AMERICAN BEE JOURNAL

OLDEST BEE-PAPER IN AMERICA

(Entered at the Post-Office at Chicago as Second-Class Mail-Matter)

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor | CHICAGO, ILL., OCTOBER 5, 1905 | Vol. XLV—No. 40

Editorial Notes and Comments

Carloads of Convention Bee-Keepers

Had everything been clear sailing for holding the National convention of bee-keepers at San Antonio, it was our intention to endeavor to get together a carload of bee-keepers from the East and North to join here in Chicago, and go on to San Antonio. Bee-keepers all along the way could have joined the party, just as they did on that memorable trip to Los Angeles two years ago.

But since it has been definitely decided to hold the convention in Chicago instead of San Antonio, we have wondered if it would not be possible for the bee-keepers of the South to get up a carload of themselves for Chicago. Perhaps bee-keepers around Denver, and further west, could also come in a carload. Then likely those in the East could meet in Buffalo and come in a carload from there.

We do not see why there shouldn't be plenty who could help work up at least the three carloads indicated There are a lot of bee-keepers that will want to come to Chicago. And surely the bee-keepers of Chicago and vicinity will be glad to meet them. The more the merrier. And Chicago will be big enough to take care of all who come—Dec. 5, 6 and 7, 1905.

◆

Comb Honey by Freight

Mr. Edwin Bevins, of Decatur Co., Iowa, sends us a letter from a commission house, in which appears this paragraph:

> "We have your favor in reply to ours, and note you are shipping us a crate of honey. In the crate you use the glass is exposed, but in the crate illustrated in our circular the glass fronts are all inside, and most railroads charge from 25 to 30 percent less freight on shipments packed this way. In some of your crates that arrived lately the glass fronts were broken, and the honey in one or two sections had oozed out."

Our advice has always been to pack cases of comb honey so that the glass would be exposed. We supposed this was what the railroad companies wanted, so that their freight men could easily see the character of the goods they were handling.

We would like to have all the honey-dealers who quote the market for the American Bee Journal write us for publication anything they may have to say on this subject. No doubt such expressions would be of mutual aid to shipper and dealer.

◆

Fall Contraction of Hive-Entrances

Gleanings in Bee Culture advises that in the Northern States, except where a late flow of honey is on, the entrances of all colonies should be closed down to not larger than 6 inches by ¼ inch deep, as early as the first of September. That seems pretty close quarters, but it may be all right. If correct, a good many will have to do some more contracting. With an entrance only ¼ inch deep there is danger of clogging by dead bees. This may be helped by a rim one or two inches deep placed under the hive, the entrance above the rim.

◆

Don't Feed Thin Syrup Late

If any colonies are still lacking in stores, the sooner they are attended to the better. A caution, however, is now needed that was not needed years ago. Of late it has become the fashion to recommend feeding syrup thin, as much water as sugar. The fashion is a good one *provided* the feeding is done early. But at this time of the year bees should not be expected to evaporate a lot of water. So to each pint or pound of water add 2½ pints or pounds of sugar. One advantage of early feeding is that the bees so manipulate the thin syrup that it will not granulate in the combs, and there is danger that the later fed and thicker syrup may granulate. To help in this direction, add a fifth of extracted honey. Lacking this, an even teaspoonful of tartaric acid, previously dissolved in a cup of water, may be added for each 20 pounds of sugar. At this time of year it is better to give the syrup hot.

Paste for Labeling Tin

General Manager N. E. France has this to say on this subject:

> To make labels stick to new tin cans, I first wipe the tin with a cloth wet with strong vinegar, then either of the following four kinds of good paste will stick:
>
> 1. Dextrin, 1 ounce; glucose, 1 ounce, well mixed, warm.
> 2. Gum arabic dissolved in water.
> 3. Gum tragacanth soaked 3 days in cold water.
> 4. Borax, 1 ounce; gum shellac, 4 ounces; boiling water, 1 quart.
>
> Another good paste is made by mixing wheat flour in cold water, then boil.

◆

Reserve Combs for Feeding Bees

Pretty late to say anything more about it now; but where such a thing is yet possible it is highly advisable to have extra combs of sealed honey. They will come in handy next spring.

◆

Outdoor Feeding of Bees

The editor of Gleanings in Bee Culture, after some "rassling" with the outdoor-feeding problem, made a call for a "perfect outdoor feeder." Now, however, he seems to have solved the problem himself. His plan is certainly ingenious, and well worthy of trial wherever neighboring bees are not sufficiently near to divide the spoils. Here is his solution of the problem in detail:

> We have overcome to a great extent the difficulty of wearing out bees experienced with the outdoor feeding. We use 60-pound cans with small holes punched in the top as before. These are *now* filled with syrup of the consistency of two parts of water to one of sugar. The weaker syrup has less of a tendency to make the bees scramble against each other. Then, to mitigate further the damage to the bees by reason of their struggling against each other, the 60-pound cans are elevated some *10 feet above the ground.* The wire bail or handle that is in the top is unsoldered. The can is then turned upside down, and the handle is soldered to the bottom. The other end of the can is perforated with small holes, as before explained. A rope is passed over a limb of a tree, 12 feet or more above the ground. When the can is filled with the two-to-one syrup, the rope is tied to the bail (now on the bottom of the can), when the can is hauled up to the height of about 10 feet. It may take several hours for the bees to find it; but when they do they will begin in earnest.
>
> The bees will form in bunches at the per-

forations. and drop down; but instead of dropping with a thud or a jar to the ground or in the grass, sustaining more or less of a shock, and wearing out their wings in the scramble to take wing in the grass, they catch wing *before* they actually strike the ground, and fly up again. They no more than get a little sip of syrup than down they go again, catch wing, fly up, take a sip and down again, and so on.

The under side of the tin is so smooth that there is nothing for the bees to cling to, and they can not do very much scrambling. But just the minute two or three get to tugging at the same hole, down they go. The result is, we have produced almost all the conditions of an artificial honey-flow. It takes the bees so long to get a load of syrup that they fly back and forth to the hives quietly, and without excitement.

Two 60-pound cans of dilute syrup will keep a yard of some 300 colonies during an absolute dearth of honey quiet for a couple of days, so that the hives can be opened indiscriminately, and combs exposed without any robbing. It begins to develop now that the bees that do most of the robbing represent but a very small portion of the whole yard. It is these that we keep busy by outdoor feeding. As they can not do any scrambling to any extent, there is not the same wear and tear that we experienced in our early experiments. We fed up for winter all of our 300 colonies at the home-yard by this outdoor feeding. What is more, this syrup is ripened in Nature's way, and therefore must make an ideal winter food.

◆

Adulterated Honey in Minnesota

Mr. P. J. Eckman, of Watonwan Co., Minn., sent us a clipping taken from the Farm, Stock and Home, of Minneapolis, dated Sept. 15, 1905, which gives a list of "Impure Foods," reported by Hon. E. K. Slater, Minnesota's dairy and food commissioner. In that list we find the following paragraph:

> Strained Honey. "Purity" brand. E. G. Bailey Co., Detroit, Mich. Illegal. Adulterated with commercial glucose. Sold as pure honey.

If only all the States would get after the adulterations, and warn the public against them, it would be a good thing for the consumers, and also the producers of pure products. Some day we hope it will be so.

Miscellaneous News Items

Nominations for National Election have been made, and the ballots counted with the following result, as per notice received from the General Manager:

FOR PRESIDENT—C. P. Dadant, O. L. Hershiser, J. U. Harris.

FOR VICE-PRESIDENT—Geo. E. Hilton. C. P. Dadant, J. A. Green, O. L. Hershiser, F. Moth, W. Z. Hutchinson, Dr. Miller, J. U. Harris.

FOR SECRETARY—W. Z. Hutchinson, J. A. Green, L. Scholl, E. T. Abbott.

FOR GENERAL MANAGER—N. E. France, W. Rohrig, W. H. Laws, F. Rauchfuss.

FOR THREE DIRECTORS—F. Wilcox, M. H. Mendleson, M. M. Baldridge, Dr. Miller, C. A. Hatch, W. S. Pouder, E. W. Alexander, J. M. Hambaugh, E. R. Root, J. McIntyre, G. W. York, G. B. Howe.

The foregoing, then, are to be the candidates, although their nomination does not prevent any member of the National Bee-Keepers' Association from voting for some other member not included in the above list, if he so desires.

◆

The National Program was already on the printing press last week when we received the following from the Secretary:

> FRIEND YORK:—Just after M. A. Gill's paper, in the forenoon session of the second day, in the program of the National convention, add the following: "Producing Both Comb and Extracted Honey On the Same Colony"—Jas. A. Green, Grand Junction, Colo.
>
> W. Z. HUTCHINSON, *Sec.*

◆

L'Apicoltore, the leading Italian bee-paper, published in Milan, in its September editorial mentions the passage in Italy of Mr. Frank Benton, the American Government apiarist, who visited several of the leading Italian apiarists, and presented to the Italian Association a photographic view of the National apiary at Washington. The editor of L'Apicoltore incidentally mentions the magnitude of the bee-interests in America, the reports of whose crops seem to be disbelieved by many European apiarists, so great is the difference in methods and results between Europe and America.

In the same number is to be found a translation of the visit of the editor of the American Bee Journal to Dadant & Sons, which was published in our issue of July 20. The publisher of L'Apicoltore introduces the subject as follows:

> We owe to the kindness of Signor V. Asprea the translation of the following article taken from a late number of the American Bee Journal. In presenting this to our readers we are sure to please them. The name of the great American apiarist, Charles Dadant, will bring back to their memory his many writings published in the columns of our journal, attracting the attention of Italian bee-keepers to the methods of bee culture in use across the Atlantic, and recognized by him as the most practical and profitable. They will learn with interest of his son, Camille, justly esteemed collaborator and to-day worthy continuator of the work of his illustrious father, and head of the new house. We regret to be unable to present also the photographs of the Signor Dadant and of his sons, so splendidly executed, which adorn the cover page of the American Bee Journal, but we will take the liberty to repeat to our readers, with good cause, the words of the editor of the American Bee Journal.

◆

Our California Honey-Letter.—One of our correspondents, located in San Francisco, Calif., wrote as follows Sept. 18:

EDITOR AMERICAN BEE JOURNAL—

Our local market is quiet just at this time, but prices are extremely firm. The following prices rule here to-day: New crop, comb, per pound, 10 to 12 cents. Extracted, water-white, 6 cents; light amber, 5 to 5½ cents; dark amber, 3 to 4 cents; and Hawaiian, 2 to 2½ cents.

Fair grade of beeswax would bring 26 to 28 cents per pound.

The figures covering the exports of various commodities from the port of San Francisco during the past year are now available, and the following data culled therefrom may be of interest to the honey-trade. The figures apply only to shipments made by steam or sailing vessels leaving this port between July 1, 1904, and July 1, 1905:

To the Atlantic United States were shipped 544 cases; to Europe, 1464; to Mexico, 1; to Central America, 4; to South America, 21; to Hawaii, 56; to the Pacific Islands (such as Tahiti, Samoa, etc.), 5; to the Philippines, 334; to Japan, 17; to China, 95; to the Far East, 32; to Australasia, 1; to the British Possessions, 166. In all a total of 2739 cases, against some 9232 cases during the same period of 1903–04.

Of beeswax the statistics show that some 6644 pounds went to the Atlantic United States, and some 15,297 pounds to Europe; the balance of the 25,490 pounds (year's total report) being scattered between Central America and the Philippines. The figures show that during the same period of 1903–04 there were but 165 pounds shipped out of the port of San Francisco, which certainly shows an extraordinary difference.

Reports from authentic sources in Southern California lead me to believe that there will be from a third to a half crop of honey, with prospects a little better in the central portions of the State. The California National Honey-Producers' Association is advising its members to hold their crop at the following figures: White, 5 cents; light amber, 4¾ cents; amber, 4 cents. One authority gives as his estimate of the honey crop of Southern California something like 125 carloads of 20 tons each; while another party, equally well thought of in the trade, and supposed to be a good judge of conditions, estimates the crop at 175 carloads. Figuring on that basis would mean a proportion of about 125,000 cans of the extracted product, and possibly 15 cars of comb honey. They say that the National Biscuit Company has made purchases aggregating 75 carloads, this concern being the largest single consumer of the product of the busy bee in the United States.

From all present indications I am warranted in believing that we will soon see materially higher prices out here for our product. We are told that Arizona's crop is almost a failure, that Colorado will have only about 60 percent of a crop, that the crop throughout the Eastern States is light, and the market well cleaned up; so it does not take so much of a guesser to figure out that an advance is a very probable result. Our honey is worth more money than we are asking for it, and we will probably wake up to the fact in a few days or weeks. "SAN FRANCISCAN."

◆

The Apiary of J. M. Butler appears by picture on the first page this week. Mr. B. wrote us as follows, Aug. 10:

> I want to thank you for the valuable information I have received through the columns of the American Bee Journal. I also send a photograph of my apiary of 42 colonies, spring count, which I increased this season to 53. I notice that some have been boasting of early swarms; my first swarm issued May 2, and I had 6 swarms before May 10. I never fed my bees anything, either. I put them out of the cellar April 1, and everything looked favorable for a big honey crop, but it failed, as it was too cold at night for the bees to do much. I secured only a few hundred pounds of honey where I should have had as many thousand pounds.
>
> The picture was taken in fruit-bloom, and the trees the hives are under are cherry-trees; they were one solid mass of bloom.
>
> It is myself examining a frame of brood and bees, and further back are my wife and a little boy who is making his home with us.
>
> J. M. BUTLER.

◆

Mr. Chas. Mondeng requests us to publish the following notice:

> MINNEAPOLIS, MINN., Sept. 28, 1905.
>
> I am now out of the Mondeng Mfg. Co., and so am no longer responsible for queen and bee orders sent to the Mondeng Mfg. Co., as they are not turned over to me. I wish that all mail orders for queens and bees, that are intended for me, would be sent to me personally (at 160 Newton Ave., North), and I will see that they are promptly taken care of.
>
> CHAS. MONDENG.

Contributed Special Articles

Changing to a Larger, Full-Weight Section

BY L. V. RICKETTS

In advocating a change from the present to a larger size section, there are many things to take into consideration. The thickness, length and hight of the section should be suitable to the inside dimensions of the super. The super should be of the same length and width as the brood-chamber. The width and length of the Langstroth hive is the standard. There are many millions of dollars' worth of hives, frames, combs, etc., of this dimension. A hive of the Langstroth dimensions is perhaps as near the right size as we will ever get. I believe the Langstroth dimensions are here to stay. There is something connected with this hive that is dear to every true bee-keeper in this country. It is the name, "Langstroth."

From tho above we conclude that we should use a section whose dimensions are best suited to the inside dimensions of the super in which they are to be used. Perhaps the 4¼x4¼x1⅞-inch bee-way section is the one in most general use at the present time. Its width and thickness are suited to the width and length of a hive of the Langstroth dimensions.

A section thinner than 1⅞ inches will require more comb foundation per pound of honey than will the 1⅞. Therefore we conclude that as to width and thickness the 4¼x1⅞-inch section is the most desirable of any of the sizes.

As stated in a previous article, this section, when fairly well filled with separatored honey, does not weigh more than 14⅔ ounces per section, or 22 pounds per case of 24 sections. This, I think, should be increased to 16 ounces per section, or 24 pounds, net, per case of 24 sections.

As already stated, the width and thickness of the 4¼x1⅞ section is suited to the width and length of the Langstroth hive. Then in order to have them hold 16 ounces of honey it will be necessary to use a section taller than 4¼ inches. We find by calculating, that if a 4¼x4¼x1⅞-inch section holds only 14⅔ ounces, one of the same width and thickness should be 4⅝ inches high in order to hold 16 ounces. Therefore we conclude that a section 4¼x4⅝x1⅞ is the best size of section. A section narrower than 4¼ inches does not fill the length of the super as it should. If more than 4¼ inches wide four of them will not go into a super with common section-holders. A section thinner than 1⅞ inches will not fill the width of the super as nicely as does the 1⅞, and it will require more comb foundation per pound of honey.

The cost of changing from the square to the tall section should not amount to very much. A strip of wood ⅜-inch thick nailed on the top or bottom of the super makes all the necessary change in the super. The end pieces of section-holders, together with separators and shipping-cases, will need to be ⅜ inch taller. I believe the manufacturers' prices for these supplies (sections included) would be no higher than for the ones now in use. By the old way we use 24 sections, 24 sheets of comb foundation, and one shipping-case in order to produce and sell 22 pounds of honey. By the new way we produce and sell 24 pounds for virtually the same expense for supplies.

By the old way the consumer pays for 2 pounds of honey that he never receives, and is disappointed. This pay usually goes to the retailer, and is so much over and above a reasonable profit. This extra pay does not benefit the producer in the least, on the contrary, it is an injury to his business. By the new way the producer sells and receives pay for 24 pounds of honey, and the consumer pays for and receives 24 pounds—both are satisfied.

In using a section 4⅝ inches tall with the bottom of the section-holder ¼ inch thick, and a ¼-inch bee-space above the sections. it will require a super 5⅛ inches deep. This can be changed to the Heddon hive or shallow extracting super, by fastening ½-inch strips on top with screws or nails. These strips can be removed without injury to the super. This super can be used for a separable or shallow brood-chamber, which, for those who prefer such a hive, would be convenient indeed. Then we have a hive-body, section-honey super, extracting super, and chunk-honey super—all in one.

We should strive to establish, as nearly as practicable, a standard in all our apiarian fixtures, and, above all, to establish and maintain a standard weight for a case of No. 1 separatored honey. This should be 24 pounds, net, including weight of sections for a case of 24 sections.

Although I have given the foregoing but little thought, I will suggest that the weight of No. 2 separatored honey be not less than 21 pounds, and No. 3 not less than 18 pounds per case of 24 sections. This would be an average of 16 ounces per section for No. 1, 14 ounces for No. 2, and 12 ounces for No. 3.

Whitman Co., Wash.

❋

Extracted vs. Comb Honey for the Masses

BY H. A. SMITH

From time to time we find set forth in the different bee-papers the way in which some one has successfully disposed of his season's crop of honey. Why should this be such a perplexing problem in some localities? The miller has no trouble selling his flour, or the butcher his meat. Why, then, does honey not meet with the same demand?

I think I have found the reason, at least in this locality.

Honey is considered an expensive luxury, and I believe the little one-pound section, which is composed partly of indigestible wax and wood, to be at the bottom of the trouble.

To talk honey up to the public brings before their mind's eye a neat little square of white comb honey, which is certainly very tempting, but the cost prevents them from investing in more than a few sections. These are not the conditions which are going to get a crop of honey off our hands.

Well, then, why not alter these conditions? Produce less of those nice, tempting supposed-to-be pounds of honey, and give the people something far easier to digest, and something a great deal easier to buy, and more for their money.

Some one may suggest dropping the price of section honey to overcome the evil. We are not getting any too much for our section honey now, considering the price of sections, foundation, separators, shipping-cases, etc. We can not afford to sell it any cheaper, and if the price of materials goes up any further, the price of section honey must go up also.

We found out long ago that wax does not digest, and no doubt in many instances the supposed indigestible honey, but really the wax has prejudiced many against honey.

As I said before, when one buys a section of honey he very seldom gets the full pound, and even then a large portion is taken up by the useless wood and harmful wax. On the other hand, when buying extracted honey, one gets his full pound of honey, with no indigestible element, and for at least 5 cents a pound cheaper than comb honey.

I believe before we can educate the public to treat honey as a cheap and wholesome article of food, bee-keepers will have to leave the comb where it belongs—with the bees.

Ontario, Canada.

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Sulphur vs. Bisulphide of Carbon for Fumigating Empty Combs

BY F. GREINER

It requires a great deal of watchfulness to summer over a lot of combs without being damaged by wax-moth. It is not the large wax-moth which is so troublesome, but the larvæ of a very small, silvery moth which puts in her work. There is also another dark-colored, almost shiny little larva or caterpillar; it has a fuzzy garment on, so it seems, and often molts, judging from the skins accumulating. Neither one of these pests tunnels through the combs, as the large wax-moth larva does, but lives more on the surface and in the cells, and destroys the combs, although not as rapidly as the large moth. It is taxing my vigilance to keep the upper hand of them, and the 60 sets of combs, not used this year on account of the poor season, have to be gone over every little while.

Sulphur fumes will rid us of these pests, but have to be applied from time to time during the warm season. Instead of the burning of sulphur, bisulphide of carbon has been recommended by a number of bee-keepers of late years. This liquid drug, when it evaporates, forms a gas which is detrimental to all animal life. It is also very explosive. It must be handled with great care. Our German bee-keepers warn against its use on this account. I have experimented somewhat with it, and have been successful in ridding my fields from woodchucks, but not my combs from the moth-larvæ, etc. Probably I did not use enough of the stuff to kill.

Some one has recently advised using one ounce of bisulphide of carbon to every cubic foot. I have never bought this drug by the barrel; but in small quantities it has cost me 35 cents per pound bottle. At the rate of one ounce per cubic foot, I would have had to buy about six bottles, at a cost of about $2.00, to fumigate once. Ten cents' worth of sulphur made a sure thing of the job, and the risk of fire is no more than in the case of bisulphide of carbon. To use the latter is very handy, and I began to think I would use it more extensively on that account, but when I found that 1½ ounces of it was not sufficient to kill the moth-larvæ in a stack of five sets of combs, I made up my mind that sulphur was enough cheaper, and better, to pay for the extra trouble.

In reality, the trouble with the sulphur is not so very great, either. It is not at all necessary—as Mr. France thought it was—to place the combs *over* the burning sulphur. It has always been my practice to burn the sulphur on top of the stacks of combs or comb honey. It is surprising how quickly the sulphur fumes will drop clean down to the bottom of the stack, no matter how high this is, and force themselves through all the cracks and crevices. Neither the combs nor the comb honey has to be moved. All that is necessary is to place an empty hive-body on top of a stack, and inside of this put a suitable dish with live coals of fire; upon this is thrown a handful of sulphur, when the whole is covered up tight with a hive-cover. This has been my way ever since I kept bees.

The quantity of sulphur necessary will soon be found out by practice. Two and one-half ounces is sufficient for five sets of combs—perhaps less would do. In fact, for fumigating comb honey this is too much, and would leave a green deposit on the surface of the comb as well as the wood of the section. One and one-half ounces is about what I use with 10 comb-honey supers, each of 24 sections.

The green discoloration of section honey by a too liberal use of sulphur must be avoided, as it impairs the looks of the product. Honey left on the hives till September needs no fumigating. It is the early honey removed from the hives in July which suffers, if any. This should be treated even where Italian bees predominate. It is safer. I have seen fine comb honey exhibited at Fairs with perforated cappings because this matter had not been attended to. Ontario Co., N. Y.

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Quality in Honey, then Quantity

BY GRANT STANLEY

THE production of honey of good quality is a feature of bee-keeping that requires considerable thought. In reading the various bee-papers from time to time, as well as having had personal conversations with several bee-keepers, I am about led to believe that the bee-keeper himself needs considerable educating on this subject as well as the public. If we can get bee-keepers as much interested in the matter of quality as they seem to be in quantity, we will in all probability hear less about inferior honey.

Now, while it is true that we are trying to induce, or rather educate, the public to know more about honey, endeavoring to make it a staple article rather than a mere luxury, it is equally true that we must place before the public an article even above suspicion, an article of as uniform quality as is possible to get. We must do this if we expect to create the demand our product warrants. It is certainly all wrong to try to educate the public to use an article of inferior quality.

Now let us look at the producers of any commodity, for instance. They simply exhaust every effort in the matter of quality, knowing very well that if they can place an article on the market of the highest quality, that the demand will rapidly increase, and eventually a great deal more be consumed. In exactly this manner many small undertakings have grown to very large proportions.

I am afraid that too many bee-keepers are too anxious to run the extractor, and as a result much honey is being extracted before it is sealed by the bees. Yes, and possibly some of it scarcely has been in the combs more than a few hours. The Hasty Afterthinker has recently said in these columns that, "One of the worst things in connection with our craft is the widespread disposition to stretch terms and provisoes, and extract honey in a dreadfully unfit condition." If we will exhaust our best efforts in catering to the people's wants in connection with an article of undoubtful quality, I see no reason whatever that honey would not become, as it should be, a staple article of the world.

Don't forget *quality*, and you will find it will pay, and pay well. Lycoming Co., Pa.

Convention Proceedings

Report of the Chicago-Northwestern Bee-Keepers' Convention, held at Chicago, Ill., Nov. 30 and Dec. 1, 1904

(Continued from page 681.)

REPORT OF THE INSPECTOR OF APIARIES.

Mr. Abbott—This whole question hinges on how the disease gets into the animal. We lose sight of that sometimes. Take for instance some germ diseases that are communicated to human beings, such as tuberculosis in which the germ that produces that must find a lesion some place. If there is a lesion on the outside of the body in some of the glands and it lodges there it will take root and produce the disease, so that you have tuberculosis of the different organs. It is not always in the lungs. A great many people die of consumption that never had anything the matter with their lungs; that is, from tuberculosis. As I understand, the development of the germ of foul brood is only in the larva. In what way does the germ get into the larva? Does it get into it by contact and communicate itself by coming in contact with the larva, or is it taken in by the alimentary canal? There are some diseases that the human family get that are taken in by the water they drink, such as typhoid fever, and must be taken in in that way; they cannot be communicated by coming in contact with a gland, but they must come in contact with the inside of the human body somewhere along the alimentary canal, mostly in the lower bowels in typhoid fever. Now, then, if foul brood is a development in the larva, in the alimentary canal, and it can only be communicated by passing in in that way and coming in contact with certain portions of the larva, then it must be something that the larva will eat, to have the disease communicated. The larva does not eat anything but honey, or the thing that might be mixed in the honey. Now, whatever does not mix with the food of the larva cannot carry the disease, as I understand it. So that the question is, What condition of things must exist in order that this germ be in the stuff that is fed to the larva? Because the germ is harmless in honey, is harmless every place so far as the disease is concerned, except it is in the alimentary canal of the larva; and if there is not some way by which it gets in there, it is as harmless as a chunk of sand, as I understand it. It only gets in through the feed, and they only feed bees honey, and the hive may be covered with the germs and not affect it in the least.

Mr. Dadant—I think Mr. Abbott was asking me the question. I think he is very correct in that matter, and the fact is, I was about to rise to make the same suggestion, with this addition, that it is stated by authorities that formic acid, which is the constituent of the poison of the bees, is an antidote for foul brood, and that would explain why the bees never have foul brood and never suffer from it. The bee carries its necessary antidote with it. It is quite likely that the disease could only be transferred to the larva by or through the honey, or through other larvæ which, of course, would pass it to the bee, and the bee pass it back to the larva in feeding. It seems to me that is very conclusive. At the same time, if there are any germs at all in the hive, and they can be passed at all so as to be fed to the larvæ, it will promote it.

Mr. Wheeler—You know if you put a clean super on a hive of old combs and the bees go to work there, they will drag from those old combs out onto the new comb and will color them. Now isn't it possible for the bees to travel from the bottom-board around this bad brood and drop those bad spores? Such questions as that are of vital importance, and I think a little of the money that is raised ought to be used for investigation, not entirely for going around and doing this business. While I think you know all these points, some man ought to be hired and paid for his time. It is either yes or no; they either give that disease in that way or they don't, and some man ought to be able to find it out.

Mr. Swift—I think the bee-keepers will find the treatment of foul brood is something like the practice of medicine.

What was first-class practice 25 years ago is bad to-day, and it is only by experimenting and testing that we will ever get at the right thing. There is no question—I found a doctor here just the other day who told me that operations that were frequent two years ago are condemned to-day by the bulk of the profession, that is, by the advanced profession, and yet they were the popular and proper thing two years ago. It may be the same thing in regard to foul brood. Tentative work is the only thing.

Mr. Root—Mr. Abbott has struck the key-note, it seems to me, as to how foul brood is transmitted. If we take Mr. McEvoy's experience, and the experience of foul-brood inspectors, it does not seem to be transmitted by the hive except through the honey, and if this theory is correct it solves nearly all the trouble. The danger lies in shaking the combs and using them over again, because in shaking the combs you may shake the honey onto the hives.

Mr. Wilcox—I am not going to shed any light on the subject, but I wanted to finish the thought presented by Mr. Wheeler. He said we should spend some of this money for investigation. So far as I am concerned, and many others, we came here for that very purpose, to investigate. I didn't know where to go to find men better informed on the subject. I don't know how to conduct an examination or investigation that would be more satisfactory than to be at a convention with such men as we have here. If we cannot learn it from the combined wisdom of the best bee-keepers in the country, I don't know where to find it. That is the way to spend the money.

Pres. York—I think Mr. Wheeler meant that we should have scientific investigation by scientific men.

Mr. Moore—I want to take exception to Mr. Wheeler's remarks. He says we must not go ahead with this thing until we know exactly where we stand. That would apply to everything in the world. We must not try to keep bees until we know all about it. How do we learn except by starting and using the things we know? The idea that we should not try till we know all about it is all bosh. Where would our medical profession have been on that basis? Mr. Wheeler says the bees will take these germs and scatter them all around, and then those foul-brood germs will get everywhere. Dr. Howard gives the answer to that. By exposing foul-brood germs to light, air and dust they die. We know that light and air and dust are present everywhere. Ask your wife, if you don't believe it. And those foul-brood germs scattered anywhere are exposed to light and air and dust, and that is fatal to them. Some more scientific man than myself can tell you how soon. Two of our members have said that which is an insult to our intelligence, and to inspectors everywhere; they say we are going to favor certain parties; that we are going to be prejudiced; that we are not going to do right. Every man who has ever gone around inspecting bees knows that is not true. We are meeting everybody, and I tell you we are human; we want people to like us; we want to be popular, and the way to do that is to do right, and to be just, and honest, and help our brothers where we are right.

Dr. Miller—How can you favor?

Mr. Kimmey—By skipping foul brood and saying it is not foul brood.

Dr. Miller—Suppose you do skip a man, would you favor that man by doing it?

Mr. Kimmey—Of course you wouldn't.

Mr. Wheeler—I was misquoted, or misunderstood. I didn't say it was best to do nothing till we found out everything. That is a misstatement. I don't mean that. I didn't say anything of the kind. I believe all such investigations are good, but I believe there is no use going to an extreme in the matter, and doing things that are unwarranted, until we have good ground.

Mr. Reynolds—I will relate my experience in that regard. Mr. Moore came to my place last July about 20 minutes to 12, and asked how my bees were getting along, and I told him pretty fairly. He said, "Have you any trouble?" I said, "Yes, with one hive; it is marked there. He said, Light the smoker and we will go and see it." We lit the smoker, and just then my wife put her head out of the door and said dinner was ready, so we went and had dinner. That was the end of it. A neighbor of mine acknowledges that his apiary is rotten with foul brood, but a short distance from me; he hasn't the money to clean it up. I sent Mr. Moore to somebody else whose apiary was fairly rotten with it, and he left orders there as to what was to be done. The man came to me to ask me to help him out, and I told him I didn't like to go there amongst his bees for fear I would carry it home. Mr. Moore said to me he would be glad to put in a few days more if he only got his expenses. I told him to write to him and get his address. This man is worth over $50,000 and would gladly pay to have it done. He wrote to Mr. Moore and the letter never came back, and Mr Moore has never answered. I was there nine times trying to get that man to do it. His wife said to me he would be fined if he didn't have this done, by the State. After that I could do nothing. The bees are all hanging in five frames in soap-boxes to-day.

Mr. Moore—I had no appropriation for answering letters, but I paid the postage and answered every letter as far as I know. It was wholly unintentional if anybody was neglected. I answered a number of inquiries where I couldn't personally go.

Mr. Smith—I will just say for the information of Mr. Wheeler, that there is now in Washington a scientific process. Mr. France is on his way there with foul brood, and the best scientists in the United States are trying to solve that problem, and it is better than we inspectors can do, and we expect information from there that will be published in all the bee-papers.

Mr. Moore—I feel very deeply in this matter, to state that any man who goes abroad and tries to help the bee-keepers ought to go for two years to the Agricultural College at Champaign and take a regular scientific course in entomology and microscopy. That ought to be done. The question is, Who is going to pay for it? I was appointed by the chief inspector, Mr. Smith, as deputy inspector. In the pursuit of my duties I spent 33 days calling on bee-keepers within my reach. I followed a totally different scheme from my chief, Mr Smith. He gave me no instructions as to what I should do. So I took the addresses that I had of the members of our Association, and there is something like 300, and attempted to call on everybody. It was published in the American Bee Journal, and we tried to advertise to every one that we would go and see whoever called for us within say 20 miles of Chicago. But we got no responses. I think there was one or two who wrote to me, suggesting that they would like a visit. I called in, on my own plan and out of 135 apiaries I found about 25 diseased. Now, you see, if I had attempted simply to go where there were complaints I would have had two out of 25. I found 23 diseased apiaries by dint of calling on everybody and examining the hives in the apiary that seemed to show disease or weakness.

Dr. Miller—How many of those 23 knew before you called that their bees had foul brood?

Mr. Moore—Not to exceed two or three. I would have to guess at that. They knew that the bees had not done as well as they did some time before, and they had not gotten any honey from that hive or from other hives, but that they had this awful disease that we understand as foul brood, they didn't know.

Mr. Dadant—Were they foul-broody in every case?

Mr. Moore—You understand it is a great deal easier to ask questions than answer them. I myself had about 35 colonies and lost practically the whole thing with foul brood. I had no experience with it, and it got into a dreadful state before I knew it was foul brood; and I didn't go at it in the scientific way that Mr. McEvoy and Mr. France teach, and that we all practice nowadays, and the result was I lost the whole thing. I found foul brood in quite a number of different stages in the hives. I saw foul brood, as I say, in those 25 apiaries, which would mean 75 to 100 colonies affected; and after a while one gets the idea in his head, and I am satisfied now that I know foul brood when I see it. It is not necessary to smell anything at all to find foul brood. The expression has been used that one who cannot tell foul brood in his hives when he smells it is not competent to treat the disease. I believe that is true, because you can see foul brood with your eyes a long time before you will smell it at all, a good sunlight helping you. That shows to me that the disease is much more widely distributed than any one has an idea. I believe the only way to do these things is to make a clean sweep of them. With infectious diseases we make laws to protect the public and we don't care a snap of the finger for the individual who is injured, as long as the welfare of the entire people is at stake. Some laws are made paying injured individuals for the loss of their goods, such as cattle and some other things, but as far as I know there is no law in the United States compensating any bee-keeper for the loss of his bees. Now, the reason has occurred to me why. Under our accepted treatments—we call it the McEvoy treatment—you can save your bees in a great many cases. If you go to the Legislature and say, "We can save our bees, but there is a big loss there, and we want to pay the bee-keepers for it," they won't understand it. If you save your hives and bees they can't see where there is much loss at all: and the duty of the inspector is to help you, and give you a money value, of course, in helping you to eradicate the disease and to save your bees and hives. Consequently, they would not give any compensating clause in any law to that effect. I made a minute of every case, and I can tell you the names, number of colonies they have, and the number of hives infected, and what I said. It would take a month if I would attempt to cover that ground.

Pres. York—Did the foul-brood inspector visit all the bee-keepers in this (Cook) County?

Mr. Moore—Not by any means. In Cook County we have from 350 to 400 bee-keepers, and my total visits were 125 or 135 calls.

Mr. Wheeler—Did you do any work in helping to get rid of the disease?

Mr. Moore—I did everything that was possible. Where there was an opening I made appointments and went back on other days and helped them cure the disease. I spent in some cases half a day with individuals to see the thing was done properly. I am green along side of these people who have made a life study of it; I feel as if I were in the A B C class. I don't want any one to get the idea that I think I am an authority on this subject, but I want to contribute my information for the general good. The people all over our State are not competent to treat it any more than they are competent to treat a case of diphtheria or typhoid fever.

Mr. Wilcox—How much is a diseased colony damaged by treatment?

Mr. Moore—Every day it is without any treatment?

Mr. Kimmey—Yes, of course.

Mr. Moore—I say it is not damaged one cent's worth.

Mr. Wilcox—How much do you have to treat those which are not diseased?

Mr. Moore—I don't like to answer these questions because it means more experience than I have had, but I give my opinion. I go to a man's apiary and he has 20 or 30 colonies. How am I to tell which is diseased? We usually go from May to September. At that time of the year the colonies are prosperous if they ever are. We walk up and down the rows of bee-hives and we talk to the owner and say, "Now, which colony has not been prosperous?" He says, "This one." We open that hive. Something is the matter with that colony; it may be queenless, it may be entirely dead, or it may be nearly dead with foul brood; and with or without smoke we open it. Almost at a glance, when you get a frame out from the middle of the brood-nest you can tell what you have got. If he suggests this or that hive we always open that. If you are not satisfied with what he suggests, say, "All right, I will look around a little." You open one, two or three hives and you have a general view of the situation. When he has 10, 20 or 30 colonies we don't attempt for a moment to go through them all.

Mr. Wilcox—You treat them all whether they are foul-broody or not?

Mr. Moore—Under our law we have no power to treat at all; we have simply to give advice. If they allow us to treat we are glad to do so.

Mr. Wilcox—What I want to find out is whether there are any damages to be paid for it?

Mr. Moore—Whether there ought to be a law giving damages to the bee-keeper? There should not, in my judgment.

(Continued next week.)

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Getting Unfinished Sections Cleaned Out

You will have some sections that are only partly filled. Don't think of keeping them as they are, to be filled by the bees another year. Even if only a few drops of honey are in them, they must be cleaned out thoroughly. Those few drops will granulate and affect the new honey that the bees put in. You must manage to have the bees empty out this fall—the sooner the better—every last vestige of honey. A good way is to pile up the sections where the bees can get at them, covering them up close against the entrance of the bees except a little entrance that will allow only one bee to pass at a time. If the bees have full sweep at them, they will pounce upon them in great clusters, and the combs will be torn all to pieces. Not more than 5 to 10 supers should be in a pile. The piles should be where they are sheltered from the rain, and left for some days, until the bees cease visiting them entirely.

* * *

Honey Freckle-Cure

A good freckle cure is the following: Eight ounces of extracted honey, 2 ounces of glycerin, 2 ounces of alcohol, 6 drams of citric acid, 15 drops of the essence of ambergris —"The Woman Beautiful," in Chicago Record-Herald.

* * *

Don't Leave Sections On the Hive

Some of the sisters who are new in the business will doubtless make the mistake of leaving sections on the hive long after the time they should be off. In the first place they are left on in the hope that the bees will do some storing in them, and then when possibly it is seen that the bees are doing no more work, the sections are still left on with the thought that no harm will come of leaving them, and so they are left in some cases till November.

Those sections, however, are not just as well on the hive as off. When the bees stop storing in them they are likely very soon to begin carrying down honey out of them to fill up the cells left empty by the young bees hatching out. First, the unsealed cells will be emptied, and a section with a few unsealed cells looks a good deal better with those cells filled than to have them empty. If the sections are left on long enough, the bees will begin the work of uncapping.

But carrying down the honey isn't the worst of it, for the honey thus carried down will be a good thing in the brood-chamber, and the emptied sections can be used to advantage another year, provided they are properly cleaned out. The more serious matter is the glue. At the close of the honey season the bees do a land office business at gluing, and the cappings and the edges of the unsealed cells are varnished over with a thin coat of glue—sometimes a rather thick coat. If a section contains foundation that is very little drawn out, or not at all drawn out, it is sometimes so badly glued the bees will utterly refuse to use it another year.

Get those sections off.

* * *

Objections to the Plain Sections

Whatever advantages there may be in plain sections, an experience in putting up a few cases of them has emphasized an objection not generally mentioned in print. A woman who was helping expressed it somewhat quaintly by saying, "You run your finger into 'em too quick." By that she meant that great care must be taken or the delicate comb will be damaged in handling, because there is so little of the wood at the edges to protect the comb. It would be interesting to know whether any of the rest of the sisters have found the same experience. If so, they will be likely to say that they can scrape and pack two cases of the old kind as quickly as one of the plain. The more careful handling necessary makes the work slower. Then, too, one's feelings count for something, and it's a more nervous job to handle the plain sections.

One must also be just a little more careful in setting down a plain section or it will topple over—not a very serious matter with the square sections, but quite noticeable with the tall ones.

* * *

More Lightning-Bug Talk

If any of the sisters who are doing editorial work undertake to introduce anything about bees, they will do well to submit it first to some one who has a little information in that line. Mrs. Lena Blinn Lewis edits the department "Our Young People," in the Union Gospel News, and she is no doubt an excellent woman of veracity in other things, but here's what she tells her young people about bees:

"A bee that works only at night is found in the jungles of India. It is an unusually large insect. The combs are often 6 feet long, and from 4 to 6 inches thick."

* * *

A Pretty Girl and the Honey-Bee

It is as natural for a girl to make herself pretty as it is for a bee to gather honey. Who would stop either in so sweet an occupation?—MME. QUI VIVE, in Chicago Record-Herald.

In accord with the general rule of proceeding from the known to the unknown, it might be better to say: It is as natural for a bee to gather honey as it is for a girl to make herself pretty.

Maeterlinck's "Life of the Bee."—We have a few copies of this book, price, postpaid, $1.40; or with the American Bee Journal one year—both for $2.00, as long as the books last. It is a cloth-bound book, and has 427 pages.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses
By E. E. HASTY, Sta. B. Rural, Toledo, Ohio.

APICULTURAL AND OTHER CONTRADICTIONS.

To the man who is so very indignant about apicultural contradictions I would say, people disagree about everything *except the things they don't care anything about.* How about religion: do they agree about that? How about politics; do they agree about that? If it comes to that, how about farming; do they agree about that? And editing—we have the editor who writes the whole journal himself, and the editor who never writes a line, and all grades between. Page 597.

THE "NATIONAL BISCUIT" STORY.

Don't more than half believe that 70-carloads-of-honey story. Pounds, say 5,600,000. Would swallow up the product of 560 apiaries producing 5 tons each to fill one order. Where were the whole of us while 560 of us were being scooped? Page 597.

LIBERATING THE QUEEN THROUGH CANDY.

Bees may gnaw through candy and get at a queen too soon. With cardboard over the candy you run heavy risks of having the queen not liberated at all. Seems to me that a thin bit of very soft woolen goods would be the right thing to put over candy. Bees would never let it alone, and it would delay them quite a bit. Page 597.

BEE-PARALYSIS—FOUL AND PICKLED BROOD.

The long and semi-scientific article of Adrian Getaz deserves well of a critic—but flaws have it in their nature that they draw more attention than merits. Valuable fact to remember (if we could be sure of it) that the *Bacillus Gaytoni* of paralysis is smaller than the *Bacillus alvei* of foul brood. Alas, the figures on page 599 seem to have gone insane somehow or other! As given they make *Bacillus alvei* forty times as long as it is thick—amazingly thread-like—and causing us to wonder why no one ever told us that before. My previous idea of the creature is more like *four* times as long as it is thick. And *Bacillus Gaytoni* more than four times as thick as it is long! Too badly out of shape for belief. Science and its conclusions are good things; but they should not be swallowed whole, not even by the unscientific seeker after the facts. Science about foul brood needs more verification, and is in a badly mixed up state. It is hardly in condition to say, "That is an error," if a multitude of practical persons engaged in practical work find that adult bees appear perfectly healthy in foul-broody hives. I would suggest that Mr. Getaz give us the alleged microscopic observations without *absolute* conclusions therefrom.

I regard the Getaz experiment on a bad case of paralysis as valuable. Requeening with a young, healthy queen saved the colony for the time being, and resulted in all old, diseased bees being driven out soon after; but the new generations of bees still had some of the disease among them The conclusion that requeening is not a sure cure, but always an improvement, seems justified. Presumably the infection is in the hive all the time, and not a day passes without many individuals contracting it. That a very subtile and pervasive infection is best fought with vapor, seems reasonable; and we may take at least with decided interest the conclusion that the vapor of camphor is the best thing we have at present. Curious that bees make such haste to propolize camphor, and cover it up inside of 24 hours. (Hardly do that if they couldn't smell it.) The propolizing difficulty ought not to be very hard to overcome. Say put the camphor in a large queen-cage, and shift from one cage to another occasionally. Still Mr. Getaz may be right, that the best way is to put it in after the weather forbids much daubing of propolis.

Perhaps the section on pickled brood is the most valuable one in the article. Many of us have no experience with pickled brood—and a good many know nothing of it either by experience or any other way. According to our writer the disease is unique in that brood-rearing stops. Hive gets "empty, swept and garnished" like the Soul in the parable. Queen lays no more. And on the introduction of a healthy, laying queen no attention is paid to the eggs she lays. They just stay *in statu quo* till in 8 or 10 days they disappear. Queen herself soon disappears if the original one is left. Evidently it is a pretty strenuous sort of plague that these words describe. A bacterial disease brought in with the pollen, which is its first nidus. But if only a little is brought in I suppose we may expect partial results—some dead and some healthy brood in the hive at the same time, and recovery. At least I think many cases have been reported in print which were not fatal.

That brood may simply starve sometimes by the hive getting so hot, and keeping so hot continuously, that the nurses stay away from their duty, is an important suggestion to be kept and tested. Pages 598-601.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to DR. C. C. MILLER, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Too Late to Divide Colonies

I have several 2 story 10-frame hives that are so full of bees that they lie out considerably of late. Now I want increase. Which is the better, to divide now or wait until spring? I will have to buy queens. Will they have plenty of honey?

I had one swarm from 28 colonies, spring count, and an average of about 75 pounds of extracted honey per colony. MISSOURI.

ANSWER.—It will likely be better to wait till spring. Less risk about wintering.

Trembling Queen—Nucleus Management

I have 3 nuclei with queens hatched from cells that I gave them Aug. 23. But I don't see any eggs. One of the queens appeared to be trembling very much, and not able to get around well, remaining about the same place on some sealed brood that I had placed in the hive. She appeared to be slighted by the workers. At this time of year I suppose it possible that the queens may not mate. If so, do you think they will be of any service to me? They all look well except the trembling of the one. What would you do under the circumstances? I am anxious to save them. OREGON.

ANSWER.—That trembling queen is pretty certainly no good. To each of the other nuclei I'd give a frame with unsealed brood. If no eggs were present a week later, I'd unite them with some colony. There is a possibility the queens might be all right next spring, but not a probability.

Red Clover Bees—Late Swarming

1. Last July I introduced 7 red clover queens. The progeny of these queens varies somewhat from a *dull* yellow of 3 bands to a real bright golden yellow of 3 bands, and in the latter case the yellow on the underside of the abdomen extends clear back to the tip. Should the progeny of these queens all be *exactly* alike as an indication of purity? The drones also vary from a slight indication of yellow to a bright orange yellow, showing in 2 or 3 bands. Should the drones all be marked *exactly* alike? These bees all seem to be regular hustlers, and I am pleased with them, but at the same time I would like to have them pure Italians.

2. My bees are now putting in vigorous work on goldenrod and other autumn bloom (of which there is profusion here), and are storing quite a good deal in the supers. If I take off the supers any time after Sept. 15, and compel the bees to work in the brood-chamber, will it have any bad effects?

3. A neighbor had a swarm issue Aug. 20. How late in the season have you ever had swarms issue?

4. My colonies are *very strong.* Is there any danger of swarming after Sept. 1, especially if I take off the supers and crowd the bees all down into the brood-chamber?
INDIANA.

ANSWERS.—1. They might be pure red clover queens without being pure Italians, but of course they should be pure Italians if they were sold as pure Italians. A difference as to tinge of yellow would not condemn them, the specification as to purity of Italian blood being that the workers should have 3 yellow bands. Drones vary in their markings, even when of pure blood.

2. There could be no bad effect unless the queen were so cramped for room as to have too few cells for brood, and there is not much danger of that, for she is likely to be winding up the laying business anyhow. Of course there is a possibility that the crowding might go so far that there would be no room to contain all the honey; in which case it would be a nice thing to take out a full frame and replace it with an empty one.

3. I've had them in September.

4. Yes, there's always danger that bees will do some fool thing in the way of swarming, but the very strong ones are not so likely to swarm as some weak one that has reared a young queen. Crowding now is not likely to produce swarming.

Wood Splints vs. Wired Frames—Changing from 9 to 8 Frames

I am now getting frames ready for next year's extracting and increase.

1. Will the wood splints, to which you so often refer, take the place of horizontal wiring of frames, when the latter are to be used for extracted honey? In other words, are splints as strong as wire when used in this way?

2. My hive is a 9-frame one, *i. e.*, takes 9 loose-hanging standard Langstroth frames without a dummy. The frames are 7/8 inch wide; bottom and end bars the same width. As propolis is freely gathered here in July and August, would you advise me to change to a nail-spaced frame such as yours by reducing the number to 8, and using a dummy—for extracted honey?

3. My present combs are all built on wired frames. Would cutting the combs out and placing them in new, unwired frames after

your pattern make them liable to break away when extracting? QUEBEC.

ANSWERS.—1. I don't know. When fresh put in, it seems the wiring ought to be stronger, for the wire is fastened to the wood, and the splints are not. Yet with ordinary wiring there is no fastening of the comb to the bottom-bar, and with the splints the foundation is fastened to the bottom-bar as securely as to the top-bar; so there may be no difference after all.

2. For a brood-chamber I would most strongly advise changing from loose-hanging frames to the Miller frame, no matter how plenty propolis might be. As to extracting-combs, I don't know. The wider frame will be more in the way of the uncapping-knife. Some say the nails are too much in the way of the uncapping-knife. I don't think they are; but then I have tried them in the extractor only on an exceedingly small scale; so I can't be certain. There being only two nails on each side, and those two being at one end of the frame. makes it quite a different affair from what it would be if the nails were at each end on the same side. Even if the nails should be in the way of the knife, you could get around that difficulty by using a little cylinder of wood ¼ inch long, and the same or less in diameter, driving the nail through this so as to have it serve as the head of the nail. It could not hurt the knife to strike this wooden nail-head. I have tried a very few such spacers.

3. I have transferred into Miller frames from wired frames by the hundred, and in a little while the bees seem to have the combs as solid as if they had been built there.

Perhaps Defective Eggs

A queen hatched July 17, 1905, and was laying July 26 when I clipped her wing. She was a very big, yellow queen. August 5 there was not a larva in the hive, but 3 frames well filled with eggs. Then I gave her I frame of honey and 2 frames of brood and bees. August 12 there was no larvæ except in the frames I gave her Aug. 5. Then I gave her another frame of brood, and so I did every week up to Sept. 16, when I killed her; but not one of her eggs had hatched. Whatever brood or eggs I gave her from other colonies was all right. When I gave her eggs to a queenless colony the bees kept them a few days and then disposed of them. The eggs were the same in appearance as any other eggs. What is your opinion of this? MASSACHUSETTS

ANSWER.—I have read of very few such cases, and had just one case in my own experience. It could hardly be any defect in the fertilization of the eggs, for in that case they would have produced drones, so the only explanation seems to be that in some way the eggs themselves were defective.

Superseding Queens by Exchanging Brood

When I wrote you about the plan of requeening by killing the poor queen and changing her brood for brood of the best queen, I had an idea that, although the plan involved some trouble, yet I felt that with this exchange the work was ended and results sure, barring the possibility that the queen reared might not return to the hive from her wedding flight. It was to save the cost and possible loss of queens in introducing that I adopted the plan. It may be that some work could be saved by having sealed queen-cells ready at the time the old queen is killed. but I had but few swarms, and but few cells from the swarming colonies, and did not care to work any colonies specially for queen-cells. There is only a limited time in which this plan I speak of can be practiced, and probably it is best to have sealed cells or young queens on hand at all other times when the poor queens are removed.

This plan of changing brood is one I have thought practicable from the time when the developments of the season have proven which are your inferior queens up to the time when there is danger that the young queens will not produce enough young bees to insure safe wintering.

I suppose that when you speak of giving a sealed cell in an introducing-cage, you mean giving it in the West cell-protector, or something similar. I am wholly unfamiliar with the use of these protectors, but suppose they are designed to prevent the bees from destroying the cells before the young queen emerges. I have done almost all of my introducing by the caged-queen plan.

I believe there is a spiral cage used sometimes to hold the virgin queen in a hive until given to a nucleus or otherwise disposed of. You can tell me about this thing just as if I were a little boy learning his a b c's.

Mr. Abbott's plan of introducing I think is a very good one, but if the requeening is to be done at the time above indicated, I believe I would rather requeen by exchanging brood. IOWA.

ANSWER —(This refers to the "Plan of Superseding Queens," page 603.) As you have been trying the plan of killing the queen and exchanging brood for that of superior stock, I am wondering a little whether you have not discovered another objection that I did not mention on page 603; that is, that in a good many cases the colony would swarm as soon as the first virgin was sufficiently mature, unless indeed you took the pains to kill all cells but one

When I spoke of giving a cell in an introducing-cage, I meant an introducing-cage of the same kind as used in introducing queens, the Miller introducing-cage of the catalogs, or something like it. There is something about it that makes either a cell or a queen safer in a cage than out of it, even if the bees can pass freely in and out of the cage. It is likely that a West cell-protector is just as good for a cell. but it would not do for a virgin or a laying queen, and these I have generally used. The West cell-protector covers the cell so the bees can not tear it, all but the point of the cell, with the understanding that when the bees demolish a cell they attack it on the side, and not at the point.

Please report fully what has been your experience with the plan of changing brood, giving both the advantages and the disadvantages you have discovered.

Keeping Down Swarming

I now have 13 colonies in 8-frame dovetailed hives, both black and Italian bees, and I don't want to increase to more than 20 to 25 colonies at any time. Would it help to keep down swarming if I used 10-frame dovetailed hives? Would it also cut down the amount of comb honey in supers as compared to 8 frame hives? I run for comb honey only. We have both white clover and basswood; also some goldenrod and buckwheat in the fall, and quite a few fall flowers in the woods and along the river. IOWA.

ANSWER —With the same treatment you would be likely to have less swarming with the larger hive, and unless you gave special attention to the 8-frame hives you wouldn't be likely to get any more honey from them.

Bees on Platform—Web-Worms in Section Honey—Carniolans and Cyprians—Uniting Colonies

1. My bees are all on a platform where there is much walking. Will that do any harm?

2. Do the web-worms ever get in section honey?

3. Where can I get pure Carniolan queens? I got 2 last year and they had 3 gold bands.

4. Where can I get pure Cyprian queens? I got 4 last year, and not one with the first quality of the Cyprian.

5. For a double-wall hive with dead air space, will tin do as well for the inside walls as wood? If not, why not?

6. What kind of perfume is sprinkled over bees when uniting 2 colonies to make them of the same odor? VIRGINIA.

ANSWERS.—1. Probably not. Bees get used to such things.

2. Yes, indeed.

3. I know nothing about it beyond what is to be seen in advertisements.

4. Again I can give no help beyond advertisements. The Government imported some, but I don't know that they are obtainable.

5. No; tin is a better conductor of heat than wood.

6. Generally they are perfumed. I think peppermint has been used, and anise, cloves, or any other perfume might serve the same purpose.

Sowing Alfalfa Clover Seed

What is the best time and method of sowing alfalfa clover seed? MISSOURI.

ANSWER —In this part of the country the time and method is the same as for red clover; but it is not cultivated here to a great extent, and if there is anything different to be done possibly some of our good friends who "live in clover" of the alfalfa stamp will tell us more about it.

Reports and Experiences

Asters and Snakeroot

What are the names of the flowers I send?

No. 1 grows in the river bottom. We call it "frost flower" because the frost does not kill it, and the bees work on it from the time it begins blooming until it ceases. It lasts about 4 weeks, or from Sept. 20 to Oct. 20, and produces honey as white as snow.

No. 2 is a new flower here. It grows on the uplands, and the bees work on it in the afternoon; they get pollen. I would like to know if it is a honey-plant also.

This has been a very bad year for the bees, as they have done nothing. The weather was too wet, and when it was not raining it was too cold. There is no basswood or white clover honey, and very little Spanish-needle, but bees are working some now, as we are having nice weather. FRANK HINDERER.

Schuyler Co., Ill., Sept. 24.

[Specimen No. 1 is known as the New York aster. No. 2 is the white snakeroot, and No. 3 is the star aster. They are all good honey-plants, and if they are abundant and the weather favorable the bees should reap a good harvest even yet.—C. L. WALTON.]

Poorest Honey-Year in Kansas

Bees are collecting but little honey. Although heartsease is in full bloom, it seems to yield but little nectar. Three crops of alfalfa have bloomed, but neither crop afforded much honey. The fourth crop is nearly ready to bloom. but late and cool as the weather may be. but little honey is likely to be had from it. This seems to be the poorest year for honey in the history of Kansas.

Rice Co, Kan., Sept. 15. G. BOHRER.

Mallow—Sage—Knotwood—Smartweed—Marigold

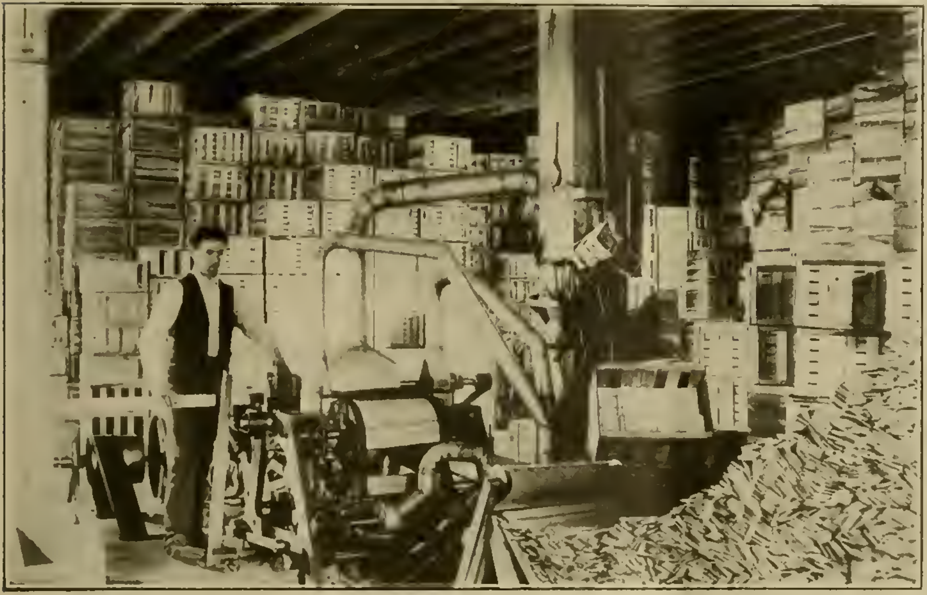
I send 5 plants that I would like to have Prof. Walton name for me, and tell whether they are all honey-plants

Honey is scarce here. It is almost too late for a fall flow now. ANTON G. ANDERSON.

Johnson Co. Mo, Sept. 14.

[Specimen No. 1 is the sand mallow, and so far as I know is not a good honey-plant. Some of the mallows are honey-plants, and if the bees work on this variety they are surely after something worth while.

No. 2 is the narrow-leaved sage, and is a good honey-plant. It belongs to the famous



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No. 5 is the swamp marigold, and produces an abundance of pollen, and probably honey, too.—C. L. WALTON.]

Colony of Yellow Wasps

There is an old bee-keeper in this county who has a colony of yellow wasps, which he is endeavoring to domesticate, with a view to crossing with his Italian bees, for hardiness, beauty, and several other qualities, among which is "life, liberty, and the pursuit of happiness." The sting of the Italian bee is said to be good for rheumatism; I am sure the sting of these same wasps is good for a lot of it. Now I am writing truth, and nothing but the truth, and am willing to subscribe to it. But don't "give me away" if you can avoid it. GEO. STOUT.

Hennepin Co., Minn., Sept. 25.

[The temptation was too great for us to resist, so we decided we couldn't "avoid" "giving you away," Mr. Stout. We also concluded that you were strong enough—or Stout enough—to stand it.—EDITOR.]

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CONVENTION NOTICES.

Minnesota-Wisconsin.—The annual meeting of the Southeastern Minnesota and Western Wisconsin Bee-Keepers' Association will be held at the County Commissioners' Rooms in the Court House at Winona, Minn., on Oct. 24 and 25, 1905, at 10 a.m. of each day. All bee-keepers invited with their wives, and help to make the convention a success.

JOSEPH M. REITZ, Sec.
W. K. BATES, Pres.

Georgia.—The Southern Bee-Keepers' Association will hold a meeting in Atlanta, Ga., during the State Fair, Oct. 20, at 10 a.m., on the Fair Grounds, at the apiarian exhibit. All bee-keepers and those interested are invited to attend and take part. JUDSON HEARD, Sec.

Wisconsin.—The annual convention of the Northeastern Wisconsin Bee-Keepers' Association will be held in the Opera Hall of Chas. Levenhagen, in Mishicot, Oct. 11, 1905, commencing at 10 a.m. All interested in bee-keeping are cordially invited to be present and take part in the discussions. The following program has been arranged for the occasion. 1. Report of Secretary—D. J. B. Rick; 2. Report of Treasurer—John Cochems; 3. Election of officers; 4. Address by President—C. H. Voigt; 5. Preparing Bees for Winter—Fred Trapp; 6. Best Management for Section Honey—J. Sedlachek; 7. Question-box; 8. General discussion.

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Until further notice, finest quality new crop California Water-White White Sage and Light Amber **HONEY** in 60-lb. tins, 2 in a case; new cans and new cases Write for prices and samples, and state quantity you want.

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ESPECIALLY FOR THE SOUTH, AS ALL FREIGHT NOW GOES THROUGH CINCINNATI.

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For Cash Orders Received in
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C. H. W. WEBER CINCINNATI ...OHIO...
Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

Honey and Beeswax

CHICAGO, Aug. 18 —The demand has absorbed all the offerings of fancy and A No. 1 grades of white comb honey at 14c, while No. 1 has sold at 13@13½c. No call at present for other than the best grade, it really being difficult to place what ordinarily is called No. 1. Extracted, white. 6@7c; amber. light and dark, 5@6c. Beewax, 28c.
R. A. BURNETT & CO.

KANSAS CITY, Aug. 24.—The honey market here shows a decided improvement and the market is firm at $2.85 to $3.00 for No. 1 and fancy white comb in 24 section cases. Amber and other grades are selling for less, according to quality. Extracted in fair demand, white selling at 6½cents; other grades down to 4½c. Beeswax, 28c.
C. C. CLEMONS & CO.

CINCINNATI, O., Sept. 8.—It appears by this time, that comb honey will not be so plentiful. In some parts of the West the crop has been more or less a failure. Prices so far have not changed much yet. Fancy white comb. 13@15c. Extracted seems to be more plentiful. In barrels, light amber, 5¼@5½c; in cans, ½c more; white clover from 7@8c. Beeswax, 26c.
C. H. W. WEBER.

INDIANAPOLIS, Sept. 2 —There is a good demand for strictly fancy white comb honey, demand and supply running about even. Demand for lower grades of comb honey not good. Numerous shipments of honey arriving, but no one producer seems to have very great quantities to offer. I quote fancy white at 14@15c; No. 1 in poor demand at 12c, and amber dull at 10c. Best grade extracted brings 8@9c in 60-lb. cans; amber slow at 5c. Beeswax, 28@30c.
WALTER S. POUDER.

NEW YORK, Sept. 22.—New crop is beginning to arrive quite freely from New York State and Pennsylvania, and is in fair demand at 14c for fancy white, exceptionally fine quality may bring 16c; 13c for No. 1 white, and 11@12c for No. 2 white and amber; no buckwheat on the market as yet. Extracted, in good demand at last quotations. Beeswax, firm and scarce at 29@30c.
HILDRETH & SEGELKEN

PHILADELPHIA, Sept. 21.—There seems to be an unusually large quantity of comb honey offered in the market at this time and prices for new goods are somewhat weak. We find small lots of bee-keepers in the vicinity offering it at 'most any price, regardless of the actual value. Honey has been sold in Philadelphia at the following prices during the week: Fancy, 13@16c; No. 1, 11@14c. Extracted, amber, 5½@6½ cents; white clover, 6½@8c. Beeswax, firm, 28c.

We are producers of honey and do not handle on commission.
WM. A. SELSER.

TOLEDO, Aug. 18—The market on comb honey at this writing is practically the same as last; however, honey is being offered quite freely, and this has a tendency to decline the price. On account of the heavy receipts of fruit there is no great demand for either comb or extracted at present. Fancy white clover in a retail way brings 15c; No. 1, 14c; little demand for amber. Extracted, white clover, in barrels, 6@6½c; in cans, 7@7½c; amber in barrels, 5@5¼c; in cans, 6@6½c. Beeswax, 28@30c.
GRIGGS BROS.

CINCINNATI, Sept. 7.—There is little to report since our quotation two weeks ago. The supply of both comb and extracted honey is fair, and the demand is good. We offer extracted honey as follows: Amber, in barrels and cans, at 5¾@6½c, respectively. White clover at 7@8½c. Fancy white comb honey at 12@15c. Beeswax, 29 cents.
THE FRED W. MUTH CO.

ALBANY, N. Y., Sept. 21.—Honey demand improving here as the season advances, and as next month is the best month we look for good prices. Buckwheat comb is scarce; that is, straight buckwheat. We quote fancy white, 15c; No. 1, 14c: mixed, 13c; buckwheat, No. 1, 13c; mixed, 12@12½c. Extracted, white, 7@7½c; mixed, 6½@7c; buckwheat, 6½ cents. Beeswax, 28@32c.
H. R. WRIGHT.

SAN FRANCISCO, Sept. 20.—White comb, 1-lb-sections, 9@10 cents; amber, 7@8c. Extracted, water-white, 4¼@5½c; white, 4@4¼c; light amber, 3¾@4 cents; amber, 3@3½c; dark amber, 2½@3c. Beeswax, good to choice, light, 25@26c.

The comb-honey market is firm at 8½c to 10c a pound. Southern California's output this year will approximate 175 car loads. Last year's crop was practically nothing, and present prospects are for higher prices. With the market practically cleaned up last spring, coupled with the fact that the honey crop is light in all Eastern producing States, the honey men of southern California may reasonably look for better prices the coming fall and winter. The present market price for extracted honey is around 5c. The crop estimate above given means about 125,000 cans of extracted. Of comb honey southern California will have, it is thought, not more than 15 carloads. While California will have about the largest crop in many years, there are some localities where the bees have done practically nothing. Arizona is nearer to a honey failure this year than in 20 years. The crop has not been so light throughout the East in a decade, while Texas is said to be only within 60 percent of its normal production.

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OCTOBER

* * *

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On receipt of the names and addresses of 5 bee-keepers in your vicinity we will mail to any address free of charge postpaid a copy of our little book, "Bee Pranks," which is a pamphlet compiled from newspaper clippings containing many laughable and interesting anecdotes which have actually happened in the life of the bee. Published only by **G. B. LEWIS CO., Watertown, Wis., U.S.A.**

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National Bee-Keepers' Convention at Chicago, Dec. 5, 6, 7

AMERICAN BEE JOURNAL

WEEKLY—$1.00 A YEAR

Published by GEORGE W. YORK & CO., 334 Dearborn Street

45th Year CHICAGO, ILL., OCTOBER 12, 1905 No. 41

MA TS
AGRIC JRAL
GE

WEEKLY

THE "GOING-TO-BEES"

BY NIXON WATERMAN

Suppose that some fine morn in May
A honey-bee should pause and say:
"I guess I will not work to-day,
  But next week or next summer,
Or some time in the by-and-by,
I'll be so diligent and spry
That all the world must see that I
  Am what they call a 'hummer!'"

Of course you'd wish to say at once,
"O bee! don't be a little dunce
And waste your golden days and months
  In lazily reviewing
The things you're 'going to do,' and how
Your hive with honey you'll endow;
But bear in mind, O bee, that now
  Is just the time for 'doing.'"

Suppose a youth with idle hands
Should tell you all the splendid plans
Of which he dreams, the while the sands
  Of life are flowing, flowing;
You'd wish to say to him, "O boy!
If you would reap your share of joy
You must discerningly employ
  Your morning hours in sowing."

He who would win must work! The prize
Is for the faithful one who tries
With loyal heart and hand; whose skies
  With toil-crowned hopes are sunny.
And they who seek success to find,
This homely truth must bear in mind:
"The 'going-to-bees' are not the kind
  To fill the hive with honey."

—*Saturday Evening Post.*

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY
GEORGE W. YORK & COMPANY
334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec05" on your label shows that it is paid to the end of December, 1904.

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Objects of the Association

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00

General Manager and Treasurer—
N. E. FRANCE, Platteville, Wis.

☞ If more convenient, Dues may be sent to the publishers of the American Bee Journal.

The Honey-Producers' League

(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

MEMBERSHIP DUES

1. Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.
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WALTER S. POUDER,
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GUS. DITTMER, - Augusta, Wis.
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Your orders will receive prompt attention. Send them early.

Don't fail to send us your address for our new catalog, which will be very comprehensive, and will give you many valuable pointers upon bee-keeping.

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Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex.

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"	January 1	"	7 "
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"	March 1	"	4 "
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Contributors

It is useless to state that GLEANINGS excels in this point. Regular departments are edited by Dr. C. C. Miller, G. M. Doolittle, Prof. A. J. Cook, J. A. Green and Louis Scholl. These names speak for themselves for they are the best writers of the day. Every issue contains articles from the pens of the best bee-keepers all over the land. A list of them would be the catalog of the most successful bee-keepers the world over. We will soon begin a series of remarkable articles by E. W. Alexander. We are safe in saying a higher price was never paid for an article of this class than we paid for a single one of this series. Every one of them will be worth hundreds of dollars to bee-keepers.

Half-Tone Illustrations

During the past summer we have had a special artist to take photographs for us. He has traveled on our account alone the past summer over 4000 miles and we can promise some very fine pictures. Many of the Second Prize Photo Contest, American and Foreign, will appear soon. Our engravings are made by the very finest engravers in the United States. Just this wealth of illustration doubles the value of the paper.

Advertisements

Gleanings prides itself on the clean class of advertisements it carries. Its subscribers show their appreciation of the fact by their liberally patronizing them. There is no better medium in the United States for those catering to the needs of the bee-keeper. We now print 25,000 copies and yet with our special edition (Dec. 15, 40,000) our old rates hold good which were based on 20,000 circulation. Gleanings gives its subscribers and advertisers full measure, pressed down and running over.

December 15th Issue

We are pleased to announce that extensive plans are now under way for a Special Christmas Issue of Gleanings. It is planned that this issue shall far exceed in its wealth of contributed articles, its half-tones and its cover design than anything that heretofore has been attempted in bee-keeping literature. The cover is to be designed and printed by one of the best color printing establishments in the United States. The design is something unique and beautiful indeed. This issue will contain nearly 100 pages, and 40,000 copies will be printed, making a bee-keepers' magazine that compares favorably with any magazine of the present day.

Subscribe

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THE A. I. ROOT CO., Publishers, Medina, Ohio.

Established in 1861
THE AMERICAN
BEE JOURNAL
Oldest Bee-Paper in America

(Entered at the Post-Office at Chicago as Second-Class Mail-Matter)
Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor
CHICAGO, ILL., OCTOBER 12, 1905
Vol. XLV—No. 41

Editorial Notes and Comments

Good Seasons Still to Come

Bee-keepers, as a class, are optimists. Some seasons are good, and some are poor, yet they are always hoping that the next season will be one of the good ones. A few years ago the editor of the Bee-Keepers' Review, however, had a fit of pessimism, and expressed the belief that we could not expect in the future as good crops as had prevailed in the past. He has now recanted, and fully reinstated himself in the ranks of the optimists, as expressed in the following:

> "Along in the '90's we had very poor honey crops here in Michigan—so poor that I came as near being discouraged as I ever did. I began to feel that, as the country was being cleared up, the honey-plants were disappearing, and that the good crops were things of the past, and not of the future. In this I was mistaken. The last three years have furnished excellent harvests."

◆

A Defense of Tanging Swarms

Some of the younger readers may not know what tanging is. Formerly it was a common custom, upon the issuing of a swarm, for all hands to join in ringing bells, blowing horns, pounding on tin pans, and making noises in any other way that suggested itself. That was tanging. It is not certain that any intelligent bee-keeper of the present day practices tanging, but nearly two pages of a late issue of Gleanings in Bee Culture is occupied with a sort of defense of the custom. Nor is it a densely ignorant writer who makes the defense, but a professor; Prof. Edward F. Bigelow.

To the argument that 99 out of 100 swarms would settle anyhow without the noise, Prof. Bigelow replies:

> "This point is weak. The noise is made *after* the clustering, in my experience, when the swarm has refused to go into the hive or to remain."

Doubtful if that experience is general. His closing words are:

> "As a countryman I resent the imputation by the so-called funny papers that 'we farmers' have been doing such 'fool things' for many generations. I guess we know what we are about, some of the time, city chaps to the contrary notwithstanding."

If "city chaps" do no worse than to call tanging one of the "fool things," they will steer closer to the truth than they generally do when talking about bees.

◆

Greasy Waste for Fuel

Greasy cotton-waste, such as can be found thrown away along the track near any railroad station, has been highly commended as smoker-fuel. Rev. R. B. McCain, in Gleanings in Bee Culture, claims as a special advantage that when one handles the stuff the fingers become greasy, and as a consequence propolis does not stick to them. Taking his cue from this, Dr. Miller, who has been in the habit of using butter to clean the propolis off his fingers, proposes that hereafter he will "try the plan of going to the hive with 'butter-fingers' prepared in advance."

◆

Stand or Colony?

The following letter has been received:

Editor American Bee Journal—

Your strictures on page 630, on the use of "stand of bees" in place of the later adopted brat, "colony of bees," are not well supported, and these strictures will give way every time you try to make a "*stand*" on them, by them, or for them.

The redeeming feature of those strictures is the ending of them by, "Perhaps some one can explain." Certainly, *some many* can explain.

Your ideas of the word "stand" have been evolved by your close environment with the editorial stand. You, therefore, pass over Webster's definitions of the noun "stand" until you come to the 6th—"a small table"—refusing to be comforted by the more general 3d definition, "A stop; a halt; as to make a stand; to come to a stand."

Now, what more applicable expression can be used when a swarm of bees has passed into a hive and has "made a stand," which every little worker would die to maintain—what more appropriate than "a stand of bees?" The expression, "A colony of bees," compares with it as dish-water does to cream.

"Stand of bees"—a natural linguistic evolution from the Anglo-Saxon "staend."

"Colony of bees"—a brat midwived into the English vocabulary about 15 years ago by a coterie of dignified apiarists, who, looking with askance upon their plain old Anglo-Saxon "Mother English," were anxious to acquire a cheap linguistic notoriety by dabbling in French-Latin. Aug. Greenfield.

It is not easy to decide just how far this letter is to be taken seriously, and how far it may be intended in a humorous vein. Certainly, however, the word "colony" is hardly the best word to choose, if we could go back far enough to decide over again. But we would have to go back more than the 15 years suggested by our correspondent, for the word "colony" has been in common use for many more years than that, no matter when it may have first appeared in the dictionaries. The bees in a hive form a family rather than a colony, taking the word "colony" as used when speaking of people, yet scientists use the word "colony" as applying to an aggregation of individuals in a common household or zooecium, as in corals, polyzoans, etc.

To take the stand that "stand" is the better word because bees make a stand, defensive or offensive, is hardly safe. For only a small number of bees make the stand, and the word could properly apply only to that small number making the stand. Besides, when those bees from Caucasus, which are so gentle that they never make a stand, become so common in this country that no others are known, how could the use of the word "stand" be justified to future generations?

Comb Honey Not Machine-Made.—We have a fair supply of the typewritten letter on this subject, which appeared in the Chicago Daily News of June 21, 1905. It is just the thing to have published in every bee-keeper's local newspaper. We mail it for a 2-cent stamp. Better order several copies, and request as many newspaper editors to publish it. It will certainly be a good thing for both the reading public and the bee-keepers.

◆

Maeterlinck's "Life of the Bee."—We have a few copies of this book, price, postpaid, $1.40; or with the American Bee Journal one year—both for $2.00, as long as the books last. It is a cloth-bound book, and has 427 pages.

Miscellaneous News Items

Mr. M. M. Baldridge, of Kane Co., Ill., called on us recently, and requested us to ask members of the National Bee-Keepers' Association not to vote for him for Director.

◆

Honey-Vinegar.—Secretary Hutchinson informs us that Mr. H. M. Arnd, manager of the York Honey and Bee-Supply Co., who at great expense took a course in honey-vinegar making, will prepare a paper for the National convention, on "Successful Experience in the Making of Honey-Vinegar." As we use some of Mr. Arnd's honey-vinegar on our home table, we know that it simply can't be beat. He will appear on the program at the morning session of the third day, Dec. 7.

◆

Mrs. Cora E. Just, wife of W. P. Just, editor of the Sauk County (Wis.) News (who is also a bee-keeper), passed away Sept. 15, a few hours after having given birth to a daughter. The copy of the News for Sept. 21 was a memorial number, containing a half-tone picture of the deceased, and also the funeral sermon, besides two beautiful poems entitled, "Alone," and "Not Lost, But Gone Before." It was all very sad. Our sincere sympathy is hereby tendered to our brother in his sore bereavement.

◆

The Minnesota Fair Premiums in the Apiary Department, were awarded this year by Wm. Russell, the Minnesota inspector of apiaries. A clipping kindly sent us by Ethel H. Acklin, contains the following announcement of the winners of the premiums offered:

> The grand sweepstakes for the largest, best, and most attractive exhibition in the honey department was awarded as follows:
>
> 1st, H. G. Acklin; 2d, Moser's Apiaries; 3d, J. B. Jardine; 4th, W. R. Ansell.
>
> Mr. Acklin took 13 1st premiums, Mr. Jardine 5, Moser's Apiaries 3, Mr. Ansell 3, and Alfred Ziemer, 1.

◆

Ahead of Bee-Stings for Rheumatism?—One of our young lady friends here in Chicago, on learning that we had a slight touch of rheumatism lately, sent us the following "new treatment," by special delivery stamped letter, with these words:

"Here's a cure for you. Try it *immediately*:"

> MR. KELLY—"An' how are ye this mornin', Mistress Flyn? Is yer rheumatiz any better?"
>
> MRS. FLYN—"Well, yis, I think it is, I thank ye koindly. The new doctor's treatment is doin' me a worl' av good, I belave. He advoises me to take queen ann [quinine] eternally, and to rub anarchy [arnica] on me j'ints. So I'm doin' it, an' I think it's helpin' me wonderfully."—From Puck.

◆

Wedding Bells at Dittmer's.—As "Miss Bessie Dittmer" she is no more. She is now "Mrs. Julius Hammer." A notice in the Augusta (Wis.) Eagle for Sept. 22, reads as follows:

> We take pleasure in announcing the marriage, on Wednesday afternoon of this week, of Miss Bessie Dittmer, eldest daughter of Mr. and Mrs. Gus Dittmer, to Mr. Julius Hammer, Rev. E. Z Thwing officiating. The ceremony, which was witnessed only by the near relatives and a few intimate friends, took place at the home of the bride's parents, which had been beautifully decorated for the occasion by the ladies of the Matrimonial Club. At 4 p.m. Rev. Thwing pronounced the words that made the twain one, which was followed by the warmest congratulations and a bountiful wedding supper,
>
> The bride is one of Augusta's most popular young ladies. and is highly respected as a lady of most estimable character. The groom is a trusted employee at the Victory Mercantile Co.'s store, where his integrity of character and genial ways have won for him many friends.
>
> The presents were both numerous and elegant, comprising silver, china, and household articles. One of the evidences of the estimation in which the worthy couple are held, was a surprise reception given them at 7 o'clock in the evening by about 30 young ladies.

We wish to add our congratulations also, and hope for our young friends a long and happy life.

"Bessie" was her father's "right hand girl" in the comb foundation factory, where she was an expert at running one of the mills. His loss will be Mr. Hammer's gain, however. But making a good home, as she will do, will even be ahead of making good comb foundation.

"The Honey-Money Stories," mentioned several times already in these columns, seems to be exceedingly well thought of, if we may judge from the expressions of appreciation that have been printed and also written so far.

The following is from the Bee-Keepers' Review:

> "The Honey-Money Stories" is the title of a 64-page booklet recently gotten out by George W. York & Co., of Chicago. It is printed on enameled paper, and beautifully illustrated with between 30 and 40 halftone engravings. In the back of the book are three bee-songs, set to music. It is edited by Earl M. Pratt, and contains a variety of short, bright stories, interspersed with facts and interesting items about honey and its use. In fact, the primary object of the book seems to be that of awakening interest in honey, and increasing its consumption.

The Progressive Bee-Keeper contains this paragraph:

> "The Honey-Money Stories" is the title of a 60-page pamphlet published by George W. York & Co., Chicago. It is tersely written, well printed and interspersed with pleasing illustrations arranged in an attractive manner, calculated to increase the desire of the reader for the best of sweets. We congratulate Mr. York on the manner in which this book is gotten up.

Then comes the following from one of Chicago's physicians, who is also interested somewhat in bees:

> That "Honey-Money Stories" is certainly interesting. I know of no better way to instruct the public in the great virtues of pure honey than by a perusal of its bright and appropriately illustrated pages. The person that conceived this attractive method should be encouraged. All honey-dealers and keepers of bees should show an enthusiastic interest in a publication so aptly in their favor, and nothing quite so tangibly encourages as a steady flow of cash orders. The writer knows whereof he speaks. M. DEE.

We may say the price of a copy of "The Honey-Money Stories" is 25 cents, postpaid, or 5 copies for $1.00. It is clubbed with the American Bee Journal one year—both for only $1.10. Send all orders to the office of the American Bee Journal.

◆

Mr. and Mrs. A. L. Boyden, of The A. I. Root Co., were in Chicago Oct. 7 and 8. Mr. Boyden made this office a brief call. Everything is "humming" at "The Home of the Honey-Bees" these days. The extra-large discount now offered on orders for bee-supplies for next season seems to have struck a popular chord among bee-keepers.

Contributed Special Articles

Honey-Dew—Sucrose in Honey—Poisonous Honey

BY PROF. A. J. COOK

THERE is something about this sugar or honey question that I think needs clearing up in many of our minds. In the first place, as to the nature of honey-dew. There are two views held—one that it is a secretion from the plants, and the other that it comes exclusively from insects—mainly scale insects and aphids.

By honey-dew I mean the sweet nectar droplets that we find scattered upon the foliage of various herbs and trees. I once thought these must be a product of the tree itself, as I found a willow the foliage of which was thickly dotted with these droplets, so much so that it was sticky. I examined and could find no insects. My experience since that time convinces me that had I investigated high up in the tree, I would have found scores of the willow aphis, and that from this insect came this honey-dew.

For years now I have been striving to get evidence that this scattered sweet on the leaves of plants is a secretion of the plants themselves. I have yet to get any direct evidence to that effect. It is true that many plants, like the cotton, have extra-floral glands, and secrete nectar, but this never falls in droplets as in the case of the real honey-dew

Again we note that the honey-dew is of benefit to the insects, as in attracting bees and wasps it secures a body-guard which protects the insects from birds. I have had ocular proof of this over and over again. On the other hand, we could not see how it would be any gain to the plants to scatter this sugar solution over the foliage, for it also attracts a black fungus which must be injurious to the plants. Plants and animals *do* not work usually in Nature to effect their own harm, but always their good.

The Nature of Honey-Dew.

As I have said before, honey-dew is reducing sugar, usually called glucose or grape-sugar. This, then, is like honey, like the sugar of digestion, and like liver sugar formed on the body, and is undoubtedly a sugar that takes less energy on the part of the bees to convert it into honey than does the cane-sugar of the floral nectar. If, then, this honey-dew has no distasteful elements, it is probably the best food for bees, as bees are hard worked at best, and we can well imagine that they might live longer with less of digestive labor to perform. The short life of the bee during the active season argues an overdose of hard work. Dr. Miller objects to this reasoning in view of the fact that organs are stronger with work. I think the Doctor would hardly urge that this were true of overworked organs. As I believe that honey is the best sugar for us—especially if our stomachs are of frail make-up—so I believe that honey-dew may often be a godsend to the bees.

Sucrose in Honey.

In a recent number of one of our leading bee-papers, it was stated that there was more sucrose in honey stored by bees from cane syrup than that from floral nectar. And it was further urged that this would enable the chemist to determine this kind of "adulteration," as the large amount of cane-sugar of sucrose would be certain evidence that it could not be honey from floral sources. I believe this statement needs to be taken with some allowance. Bees may be made to take a great deal of syrup in a very short time; I have fed over 20 pounds of syrup at night to a single colony, and have found it all stored in the morning. Some of this was extracted from the comb in the morning, and some after it was sealed over. The amount of sucrose had very greatly diminished in the capped honey. This shows that digestion went on after the honey was stored, or else that the bees took it again into their stomachs, which is not probable.

Bees usually gather nectar from the flowers very slowly, and thus the digestive juices are ample, and the sucrose or cane-sugar of the nectar is very perfectly reduced to grape-sugar, or dextrose and lævulose. I imagine that they might gather so rapidly that this reduction would be much less perfect—there being too little time for full digestion—in which case we would have a large percentage of cane-sugar in the honey, although it would be from floral sources. Hives on the scales here now (May 18) show 24 pounds per day. On the other hand, if we should feed cane-sugar syrup very sparingly this would be fully digested. I do not believe any chemist would be justified in pronouncing upon the source of honey from the percentage of cane-sugar which it contains. This is no guess with me. It is the result of actual test.

Poisonous Honey.

Again we have an article in one of the bee-papers giving a case of severe poisoning from the eating of honey. I have often expressed in the papers my doubt of the truth of such statements. I doubt if bees ever collect nectar from flowers or other natural sources which results in poisonous honey. Else, it seems to me, this kind of honey would be very much more common. We know honey is often poisonous to certain people, and is it not more than probable that such sickness comes from over-eating or individual idiosyncrasy of the person, and not that the honey is really poisonous?

I have several times received this so-called poisonous honey, and have eaten it and received no harm at all. It seems to me that the sickness can be explained with no accusation against the honey in the explanation, while I do not see how we can believe in poisonous honey from flowers, and find the occurrence so rare. I knew a whole lot of students who were once made deathly sick by eating honey. They found a bee-tree; it was late in the forenoon, and they were hungry. They ate immoderately, as boys will at such times, and very few of them escaped the punishment for their intemperance. It would be folly to say that the honey that they ate was poisonous.

Let us inquire further before we give too much credence to this matter of poisonous honey-plants.

Los Angeles Co., Calif.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Two Queens in One Hive

BY DR. G. BOHRER

During the present season I found in two different hives two fertile queens, and both laying eggs in each hive. In one case there was a 2-year-old queen with a clipped wing. Early during the swarming season I opened the hive and found several queen-cells sealed, and at once closed it, expecting the colony either to cast a swarm or to supersede the clipped queen, she being old. About one month later I again opened the hive and found a fine young queen laying eggs, and I set the frame she was on on the ground for safety to her, as I wished to look through the hive for a frame of brood with which to reinforce a weak colony. And on lifting out the third frame I found the old clipped queen, still in apparent health, and laying eggs. I removed her, and gave her to a nucleus which she has built up to a fair colony.

In the other case, I had taken a good queen from a colony in the last days of February, that had almost died out. I put her into a cage, made by bending a piece of wire-cloth, 4 inches square, into a flattened cylinder, and placed it between two frames in a colony of hybrids, where she could have access to honey in case the bees refused to feed her. I kept her there until in April, and took the queen that belonged to the colony and liberated the caged queen. The bees injured her by crippling one of her legs, and in a few days started queen-cells, which I destroyed on two different occasions, and thought they had abandoned the idea of superseding her. But about one month later I opened the hive to remove the crippled queen with a frame of brood, for the purpose of starting a new colony, but I found a young queen, and took it for granted that the crippled queen had been superseded by this young one.

I removed the hive to a new stand, thinking that I would give them a queen I had sent for and was expecting in a few days. On her arrival, I opened the hive to put in the new queen, and began to look for queen-cells, knowing that there would be some on the removal of their only queen, as I supposed. I had not gone far until I found the crippled queen and no queen-cells, and also found plenty of fresh eggs; thus proving beyond all doubt that this queen had not been superseded, but that she was still fertile and laying eggs freely, and is still doing so.

But in the presence of all this, in both instances it is highly probable that both of these old queens would have been destroyed, and the young queen left at the head of the colony in each case.

I have called attention to these cases not because they will be of very great worth to the bee-keepers of the world, but because they are interesting on account of the rarity of such cases. In the first case, I feel quite confident that the young queen had entered the hive through mistake, on her return from her bridal trip, as I found no cells from which a queen had lately emerged. But by the side of the hive I found a nucleus deserted by nearly all the bees, their queen being gone, and I supposed she had been lost on her bridal trip until I found the young queen referred to. I have said she had entered this hive through mistake, but possibly she may have been reared in this hive, but I found no evidence to that effect, and it may be possible she entered this hive as a matter of choice, it being far more densely populated than the hive she was hatched in. There were so few bees in it that at times no bees were visible on the outside, while the other hive had more or less bees on the outside, about the entrance, thereby possibly making it more attractive to a queen than a hive with no bees in sight at the entrance.

Rice Co., Kan.

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Advantages of Bottom Starters in Sections

BY EDWIN BEVINS

On page 485, it is asked who besides Dr. Miller has found advantages in bottom starters. Thanks to Dr. Miller, I have used bottom starters the last two seasons, and wish I had begun their use when I began to keep bees. As I ship most of my honey, I find their use a great help towards insuring safe shipment. Better filled and therefore better looking sections are made with than without them.

A top starter that comes almost down to the bottom-bar of the section does not answer so good a purpose. The starter is liable to get swerved to one side, and perhaps attached to the separator.

I put in both starters with a Parker foundation fastener, putting in the bottom one first. The work is done just before the sections are needed on the hives, and when the weather is so warm that artificial heat is not needed. Dr. Miller uses a Daisy fastener, and puts in the starters in cold weather. If I had prepared a whole lot last winter, as he does, I should have to carry most of them over till next season—a thing which I would prefer not to do. The additional work required to put in the bottom starters is not great, and bears no comparison to the advantages which accrue from their use.

I will remark here that I have a Lewis foundation fastener, but have never used it as the Parker does very well for me.

When these bottom starters are used the bees, like Nature, seem to abhor a vacuum, and they go right to work and close up that little vacancy of a quarter inch or so between the two starters. They will extend the comb and begin storing here and a little above before they will do it next to the top-bar of the section.

Here I hope I may be pardoned for remarking a little on the wastefulness of the practice of using only a narrow starter at the top, especially in localities where the flow comes mainly from white clover, and is therefore of limited duration. When these narrow starters are used hundreds of bees in each and every section must form themselves into the shape of a big V, and stay there for days preparing storage-room for that which, during this delay, is being wasted in the fields. When full sheets of foundation are used a hundred bees can find room for work where but one can find it with the narrow strip. I have marveled at the shortness of the time before honey could be seen glistening in the tiny cells when the full sheets of foundation are given. I have also marveled at the rapidity with which supers with the full sheets are filled when the honey-flow is good.

Some bee-keepers seem to have a preference for the narrow starter because of what they call the superior delicacy of the product. Where do they find a market for this delicacy that will take it at a price commensurate with its additional cost to produce? The additional quantity of honey secured by the use of full sheets of foundation will, I am sure, bring more money than will be received from the added price of the delicate product. If delicacy is what is wanted, why not get it in the shape of the finest grades of extracted honey? The one who eats this kind does not have to eat any indigestibility in the shape of honey-comb. But when extracted honey is mentioned, the specter of adulteration arises.

It is not creditable to the fighting qualities of extracted-honey producers that this prejudice against their product goes unrebuked and unremoved, especially in States that have a pure food law. It is not creditable to the general public that it will buy so much butter at 20 cents a pound and upwards, and so little good extracted honey at 8 or 10 cents. The question of palatableness has of course to be left to the eater, but the question of nutritive value must be left to the chemist.

The difference in the nutritive value of a pound of butter costing 20 cents, and of 2 pounds of honey costing 20 cents, is, I believe, largely in favor of the honey.

It is hard for me to believe that there is not some way to inspire in the mind of the public so large a degree of confidence in the purity of extracted honey as to lead to its larger use. I will reiterate what I have said before, that the small towns and country districts should get more of it than they do through the efforts of the local bee-keeper.

I will now turn myself into a peace plenipotentiary with a view to the bringing about of a reconciliation between Dr. Miller and Mr. Hasty. Dr. Miller puts bottom starters in his sections and wants the lock corners down. Mr. Hasty wants to know why, and the Doctor says that it is because—because they look nicer so. How much difference there is between "better" and "nicer" I will leave the Doctor to explain. I will venture a guess that the lock corners sometimes have some stains in the joints that do not get removed.

When Mr Hasty says that sections with lock corners up are much more liable to be pulled apart in handling, he seems not to remember that Dr. Miller not only uses bottom starters but T tins also. The liability to pull apart is, I think, much greater where section-holders are used than where T tins are used. I use section-holders, and put the lock corners down. It requires some care to avoid pulling apart, but I prefer to use this care because—because the tops of the sections are more easily cleaned when perfectly smooth, and look a little better (or, shall I say, nicer?) when cased for shipment.

Just here I have concluded to give up the job of peacemaker. The differences between the ideas and practices of the two men are irreconcilable. Mr. Hasty's short-comings are appalling. Here is a list of them:

1st. He wants the section, whether in pile or case, to stand the other side up from what it was when being built. I suppose that is to enable the honey *all* to run out in case of any bruising or abrasion of the cappings.

2d. He doesn't say that he makes finger-prints in the honey sometimes, but leaves the impression that he does.

3d. He leaves the supers on the hives till the bees have removed the honey from the unsealed cells. How much travel-stain does the surfaces of the sections acquire while waiting, and how many bees are monkeying around there that might be more profitably employed somewhere else?

Lazy? No use for the interrogation point. Mr. Hasty owns to the soft impeachment. So I will simply say, "Lazy."

Summing things all up, Mr. Hasty, you're a bad 'un. Repent and reform, or have some fellow bigger'n you, with a shingle in his right hand, take you across his knee.

Decatur Co., Iowa.

Convention Proceedings

Report of the Chicago-Northwestern Bee-Keepers' Convention, held at Chicago, Ill., Nov. 30 and Dec. 1, 1904

(Continued from page 698.]

BEES AS PROPERTY, AND ASSESSABLE.

Mr. Swift—Our bees as property are not assessable under the laws of the State of Illinois. If they are not assessable and produce no revenue why should the State pay revenue back? Take cattle or any animal that is diseased, every one is assessed upon that animal and pays revenue into the State.

Dr. Miller—They may not be assessable but they are assessed; I pay taxes on my bees.

Mr. Swift—You don't have to. They are not assessable.

Mr. Moore—You are a little in error, Mr. Swift, in the schedule is a clause which says, "Other property." Now to a really conscientious man, if he calls bees property, he ought to list them; and I know of two or three who list them and are assessed. Now if we are assessed, that will give us certain rights before the Legislature.

Mr. Swift—The only thing is this, bees come under that class of *feræ naturæ*—they are wild by nature; and consequently anything of that character is like a flock of prairie chickens—the farmer does not have to pay taxes on them. Bees are not assessable under the revenue laws of the State of Illinois unless a man chooses to list them as "other property." Consequently this is my opinion. The Supreme Court may differ from me—I am not certain it has ever been adjudicated upon by the Supreme Court—but I think they are not assessable from the very fact that without any provocation a colony of bees does sometimes take wing and go away in the spring. It is the very fluctuating character of the thing. A man in the fall might have 100 colonies, and in the spring he might not have more than 15, and according to Dr. Miller, then, he has to go before the Board of Supervisors and the Committee on Payments and present his claim for the loss of his property, unless he chooses to pay on something he has not got. Under those circumstances, the bees not being assessable, by the very nature of the property, as property that is fixed and tangible is, that can be gotten hold of or levied upon—because I don't believe there is a sheriff in the State would levy on a hive of bees—by that very fact you could not go before the Legislature and ask any law that would give force that a bee-keeper should be recompensed if his bees were injured by being treated for foul brood or any disease. But if you can get the Legislature to recognize that this is a source of revenue for the State, and of wealth to the individual, and his wealth in that way can be assessed and taxed as his money and household goods and the things he can buy as the result of his product, then they will legislate and will do what they have done in the past—give you any appropriation for the protection of that industry. But when you come to ask for recompense for injury done by making the injured better, you have gone up against the wrong thing, and will meet a snag every time.

Mr. Dadant—I would be very glad to hear bees are not assessable. I have been paying taxes on bees for many years. The argument is very good but it is not only bees; there is the hive, the combs, the brood, the honey, the supers and sections of foundation and all that belongs to the hive. I pay taxes on my bees; I pay taxes on the comb foundation I manufacture. All this belongs to the bees. If the bees are not assessable, and all this other part of the property is not taxable, I have $15,000 worth of goods on hand. I have been paying taxes, and I would be ashamed not to pay taxes.

Mr. Swift—Mr. Dadant does not bear in mind that he is in a manufacturing industry.

Mr. Dadant—We would suffer from foul brood if our bees had it.

Mr. Swift—You say your wax does not get affected by foul brood. As a manufacturer with an industry with a capital stock, then, you would be assessed upon it whether incorporated or as an individual; but here is a man that has got 50 colonies of bees on his farm—I don't believe he can be assessed on them. If a test case was made, from the very fact of its fluctuating character, I do not believe he could be assessed. The honey might be assessed, and possibly the hive, if you could fix what the value would be, but not that which deteriorates and is so fluctuating it would be almost impossible to determine. But the product of the bees in his possession is property that is assessable. Just the same as in your commission business if you have a thousand cases of honey in your warehouse on the first day of April you are assessed upon that, upon its market value, upon a fifth of its fair cash valuation. But upon bees out in the field there is no assessment. I don't believe it ever can lie.

Mr. Colburn—I had hoped to continue this discussion on foul brood because I am particularly interested in it. I am no lawyer, but listening to the gentleman here I want to say this, he makes a particular point of *feræ naturæ*. I want to ask if the wild ox and the wild goat and all animals were not at one time *feræ naturæ?* Mr. France has a great many papers here pertaining to the legal status of bees. Quite a number of decisions have been made lately in regard to that very point. Bees sometimes leave my premises and go on the premises of my neighbor. The question is whether I could go after them or not. Mr. France might be able to tell us about the legal status. As to bees being assessable in consequence of their fluctuating nature, you might answer the question by saying a man might have 50 cows on his place and they may all die. Therefore I don't consider that is a good argument in that view of the case, for the assessor doesn't care a cent what is to become of that property; if he finds it in my possession he will assess it. The big factories up in the stock yards have a million, or two million dollars' worth of pork piled up there. When the assessor goes around it is all in New York, but if it is there he will assess it. The same way with bees. I think they are assessable if they are there at the time the assessor comes around.

Mr. Kimmey—I want you to indulge me just a minute. All of these men who have talked want this discussion stopped. I am responsible because I asked the question. I used to be a lawyer myself. I didn't know much law and have forgotten a good deal I once knew. But I commenced in 1868 in the business and have been connected with it ever since, and after listening to Mr. Swift on the question whether bees are assessable or not, I believe he is mistaken.

Pres. York—They used to be when you studied law!

Mr. Kimmey—You men that have been convicted at law don't say anything. You remember the Irishman who said, "I don't want to go to trial." The judge says, "You needn't be afraid, you will get justice, and be jailed." He replied, "That's just what I don't want." [Laughter.] It is true my bees go out on my neighbor's lawn and gather their honey, but it is also true that bees have been recognized by the laws of this country as property, but prairie chickens have not. You can steal bees but you can't go over to the other man's farm and steal prairie chickens. Of course you can commit trespass. But when you steal a colony of bees don't you believe they are *feræ naturæ* and that you can get out of it. You will go to the penitentiary, probably. He can sell the prairie chickens after he shoots them.

Mr. Smith—He can't sell them after he shoots them.

Mr. Kimmey—There is another fellow that has been caught. [Laughter.] If you obey the law you can shoot them. There is a certain time of the year. Do we want to say we are going to own property that is valuable to us, out of which we make our living, and that it is not assessable? If there is any such idea as that let us be honest and fair and drop it. If they are not assessable I think they should be made so. I rather insist upon Mr. Moore making a statement because he came to my house and we had a peculiar experience down there. Mr. Moore came to me from visiting an educated gentleman, a man that knows all about the anatomy of the bee and foul brood, and that sort of thing, and Mr. Moore told me that this gentleman had one case of foul brood. I had never seen any and I wanted to see, and feel, and smell it. I went up there and I told the gentleman that I wanted to see the colony of bees that Mr. Moore said had foul brood. He says, "You can't see any foul brood here." He also said he had once been cleaned out entirely by foul brood. I was ready to believe there was something there. I know he bought some bees of another neighbor who had foul brood. I had some of the same bees; in fact, the only ones I had to commence with came from there. I was interested in it. He said he had a small nucleus that was doing fairly well and in the meantime had a hive full of comb, no bees, and he wanted those bees to take care of that comb, and so set the hive with the comb on top of the nucleus. Consequently the queen and some of the bees moved out, and then came the cold weather last spring and the brood in the lower hive died. I was ready to believe that story. He also said that Mr. Moore said he was not an expert. I suppose Mr. Moore said the same things to him that he said this morning. I took it for granted there was no foul brood, and didn't insist upon an examination. It seemed to me, then, and it seems to me now—I want to be frank and fair about it—Mr. Moore either ought to know what foul brood is, without going two years to the agricultural college, or else Mr. Moore ought to stop inspecting. I believe after hearing him talk here this morning that the bees of the gentleman I referred to had foul brood, and that Mr. Moore knew it. I think he wants to shake off some of his modesty and say he knows foul brood when he sees it. I want to mention another thing this gentleman told me. He said, "Notwithstanding I believe there is no foul brood I am going to burn that thing up, hive and everything," which he did that night; and I believe that is the proper spirit that any one should show even though one may have a doubt in regard to it. A hive of bees of course is not of much consequence, but if he finds it in one, and there is more than one hive, he should be willing to investigate. Mr. Moore came to my place and looked my colonies over and did it in a very thorough manner, for which I am obliged to him. I said, "How much do I owe you?" He replied, "You owe me just one dollar, and I want you to pay it to join the Chicago-Northwestern Bee-Keepers' Association. I want to state the facts, and I am impelled more to say it by the remarks the gentleman made in the rear of the room. I believe Mr. Moore has done his duty, and he is a good man, and I don't want him to go around saying, "I don't know," when he does.

Mr. Moore—I am not correctly quoted in the case which Mr. Kimmey has mentioned. The gentleman Mr. Kimmey referred to merely plays with bees for pleasure. He told me he had practically been cleaned out with foul brood, but that he hadn't any at that time; and I certainly told him, as I have told everybody, that I knew foul brood when I saw it, absolutely, and I do know it. When it comes to these scientific matters, in which every subject is involved if you come right down to the very bottom of it, I say I am not an expert, as Mr. France or Mr. McEvoy is, because I have not got their years of experience. But I absolutely know foul brood, and I told that gentleman so, and he said, "I haven't got it." We examined one or two of his hives and the bees were very cross; I got stung repeatedly. We had smoke, too, lots of it. When we got done with that hive I showed him he had foul brood, and I showed him the proofs of it, and he admitted that it was foul brood. There was also pickled brood in the same frame with it in the same colony; and he didn't deny to me at all he had foul brood in his apiary.

Mr. Kimmey—When Mr. Moore was in our section he went to every bee-keeper he could find, and spared neither time nor pains in going to the bottom of all of them. I gave him the name of every bee-keeper I knew within five or six miles, and I understand from hearing from them that he visited all of them.

Dr. Miller—I have a resolution to offer: "Resolved, That it is the sense of this Convention that it is desirable that bees should be assessed and taxed."

Mr. Smith—I might say that that same resolution was passed at the State Bee-Keepers' Convention two weeks ago, in Springfield.

Mr. Moore—I want to correct some of these lawyers that are talking about common law and State law. Whenever the Illinois Legislature raises its hands it wipes the common law off the land.

Pres. York put the motion, and a vote having been taken it was declared carried.

BLACK BROOD—PICKLED BROOD.

Mr. Colburn—We hear about black brood, and this summer I ran across two or three symptoms in my apiary of something not exactly like foul brood. Some four years ago up on the North Side I had an apiary and I had something I didn't understand, so I sent a portion of the brood to Dr. Howard, and he returned it stating it was not foul brood, but pickled brood. This year I have something just like both, and not like either. I think possibly we may be getting a little taste of black brood; and possibly the reason we differ is that we are looking at things from different points, or rather have a different disease; that may account for the discrepancy of symptoms, etc., which we find in different hives.

Dr. Miller—I rise to a question of privilege. I have a whole lot of speeches on foul brood, and I know you would be delighted to hear them, but I think the time is passing, and I believe we ought to hear from Mr. France.

Mr. France—I don't know just what part of this discussion you want. Do you want the description so that you may know without guessing when you look into a hive or not?

Dr. Miller—Give that first as briefly as you can.

(Continued next week.)

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.

By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

Putting Weak Colonies Over Strong.

And now we have a report of 6 colonies put over 6 stronger ones and left a long time—left till the middle of June, and still not a queen killed. And to make it seem more remarkable, they were on shallow frames. Still, on reflection, we may decide that it's not much of a "booster" for the new method, after all. They were bees of a very quiet disposition to begin with; and our perishing remnants are not always such. These colonies were sufficiently strong that they scarcely needed anything in particular done for them—i. e., hardly the kind of colonies we have been studying. They were strong enough to be above the temptation to abandon their own organization and join as individuals a stronger crowd. This is what works the ruin in many of the cases of failure, I suspect. While alone it's "root hog or die;" but when put in the same hive with a more prosperous colony the third alternative of naturalization presents itself; and they accept it until the queen has no one to protect her (or thinks she's coming to that). All the same, we can thank E. W. Diefendorf for his very instructive record. Page 604.

Only 1 Swarm from Each 9 Colonies.

Only 30 swarms from 271 colonies is quite a record. The apparent reason of it—steady and abundant honey-flow—is the point for us to remember. You see, in these days everything is being called in question; and some of our professional idol-smashers are liable any day to deny with contemptuous laughter that swarming is ever hindered by abundant honey in the fields. Let's have this item of Wm. Kernan's ready for him. Page 604.

Dark Honey Below and White Above.

Fine theory, to have all vacant space below filled with dark honey, and so much the more white honey put above. Sometimes, with some bees. I guess it would work. If I should try it maybe expansion of the brood-nest would take place, and the dark honey be moved up above to mix in. Page 613.

Section Honey Never Poisonous.

Natives who chew up combs, brood, feathers and all, might possibly get poison where there was none in the honey. Also even with poison present in the cells of thin sweet prepared for immediate use, there *might* be none in the sealed surplus honey. That poison should be only in wild honey as noted, may be because it comes from a plant that grows only in limited localities, and those localities all distant from the white man's bee-keeping. I'll guess, however, that the New Zealand poison comes in always in small quantites, and *never at a time of year when surplus is being stored*. Consequently, it is always in or near the brood-nest, and troubles nobody except when the brood-nest is broken up, as it is in getting honey from a bee-tree. The possibility of a poisonous fungus, growing in the pollen of the hive in cold weather, should not be forgotten. This would account for similarity of symptoms in widely different localities. Also vindicates the common sense of the bees—pollen not poisonous when they brought it in. I rather think it remains to be proved (with no probability of there ever being any proof) that serious poisoning ever resulted from section honey, or from extracted honey if produced as it should be—in a super entirely away from the brood.

It wouldn't pay the Association to distribute that Lancet article free. Page 613.

Color of Beeswax.

I'm not sure he is wrong, but I think he is—C. P. Dadant, on page 616, where he says "beeswax is always white when first produced." The way it stands in my mind is this: When beeswax is produced by bees that have been mostly at secreting wax for a long time the scales are white; but when produced by bees that have recently been digesting large amounts of pollen to feed young brood, the scales have a yellow tinge to start with—blood and secretions and all getting some of the superabundant coloring-matter of the pollen. May be I'm wrong. Analogy: Absolutely pure butter is white, I suppose. The food the cow gets in January does not color it; but the food the cow gets in June colors it yellow.

Vest-Pocket Foundation Holder.

Capital, Editor York! Just one of the simplest, cheapest, and most effective of ways to combat the manufactured-honey fib. A nice little holder for the vest-pocket with comb foundation in it. Should contain at least two pieces, one of surplus foundation and one of brood foundation. Show the good folks right and left one of the props the fib rests on. And yet Mr. Wheeler has worked on this line and things oft went badly awry. No. 1 retold to No. 2, and he to No. 3; and somewhere on the line the new and truthful explanation got changed back into the old falsehood or something about as bad. Queer creatures humans are. Page 617.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

What Has the Harvest Been?

What have the sisters accomplished this year? Please let us have your report, if it is nothing more than a postal card saying how the harvest has been. If the total amount of honey is given, please give also the number of colonies, spring count.

Can't the sisters do a little better than the brothers in this respect? Every now and then a brother reports something like this: "I got 1500 pounds of nice section honey this year," but forgets to say a word as to how many colonies he got it from. From that statement alone one gets no idea whether the season was bad or good. If he had only 10 colonies, then 15 pounds was phenomenal, but if he had 100 it was a failure. Either he should give along with the amount of his crop the number of colonies he started the season with, or he should give the average yield per colony. Indeed, it wouldn't be a bad thing to give both.

But any kind of a report from each of the sisters will be welcomed, together with any little item of interest that may occur. Please let us hear from all.

* * *

Bee-Smokers with Light Springs

In many things a woman, with less strength, wants things lighter than a man. But the rule does not apply to smokers. A woman, when working at bees, needs just as big a smoke as a man. Neither does the one with a few colonies need a smaller smoker than one with 100. For all the difference in the price, one may as well have a good-sized smoker as a toy, even if one has only 2 colonies. To be sure, a smoker is not used a great deal with 2 colonies, but when one is needed a good one is needed, one that will hold a lot and give a big volume of smoke, if a big volume is needed. And a colony needs just as big a smoke if it's the only one in the apiary as if there are 99 others beside it.

But there is one thing a woman ought to insist upon in a smoker. For that matter, so should a man. That one thing is a light spring. There is no sense in having the spring in a smoker so stiff that one's hand feels like cramping after half a day's work. All the stiffness needed in a spring is enough to throw open the bellows without letting the smoker drop out of the hand. Smokers in general are made with springs much too heavy, but if you insist upon it you can get one with a light spring.

* * *

Results of the Season at Dr. Miller's

The season of 1905, at Marengo, as in many other places, was one of brilliant promise resulting in more or less blasted hopes. White clover was in great abundance, and the bees had more than they could do. About the third week in July, however, the flow closed. White clover seemed as abundant as ever, and so continued for weeks after it ceased to yield nectar. It didn't seem too dry nor too wet; neither too hot nor too cold; nothing appeared to be wrong with the clover bloom, but it just stopped yielding. There were one or two little spurts, but they didn't last. So a good lot of the sections we had prepared were never taken out of the shop.

Too much faith in the great prospects made us unusual trouble with unfinished sections, and it would have been better if so many had not been put on. But the prospect when they were put on was just as great as it was at the same time in 1903, and if the yield had continued as it did in that year, there would have been loss with less sections on. So how is a body to tell?

One good thing about it was that there was no trouble from the harvest gradually shading off from white clover into darker honey. The last was of the same quality as the first.

A peculiarity this year was that until near the last of September no bees were seen at the watering places. Usually they visit these places more or less throughout the season.

Taking account of stock, here is the way the matter stands for the season:

178 colonies, spring count, gave 11,500 pounds of comb honey and increased to 218 colonies. Part of that 11,500 is estimated, but the estimate is under rather than over the mark.

After all, a yield of 64½ pounds per colony with 22 percent increase is by no means so bad as it might be. Indeed, if we could be sure of as much every year it would do very well. But, then, we had counted on such big things for 1905.

◆

Honey-and-Almond Paste

Probably few of the sisters feel they have time for a "beauty massage," but it may be well for them to know that honey is an important ingredient of the paste used for that purpose, in case some one else wants to know about it. Here's a recipe taken from "The Quest for Beauty," in the Chicago Daily News:

"To make honey-and-almond paste to use in massaging the arms, rub the yolks of two eggs with ¼ pound of extracted honey and 2 ounces of ground bitter almonds. Then add slowly 2 ounces of almond oil and ⅛ dram each of attar of cloves and attar of bergamot."

◆

Our Latest Swarm

Not long ago some one asked what was the latest we had ever had a swarm. This year we had one Sept. 22. It seemed a very foolish thing for a swarm to issue at that time, when there was nothing yielding nectar, and nothing but certain death to look forward to; but bees sometimes do foolish things. No one knew where the swarm came from, so it could not be returned. But it was a very accommodating swarm, and settled on a fence-post, so all that was needed was to hold a hive on top of the post till the bees went up into it.

◆

Results of the Season

My 10 colonies, spring count, gave me about 300 pounds of white honey. I think there will not be half as much late honey. This is a poor locality, as the farmers raise so many grapes and potatoes. My golden Italians, from a queen received last year, did not swarm this year, but gave me 75 pounds of honey, and are in fine condition for winter.

Honey moves off slowly here. I sell mine to customers in the country and surrounding villages. MRS. NELLIE G. PAXSON.

Erie Co., N. Y., Oct. 2.

◆

Bees Did Fairly Well

My bees did fairly well this season considering the weather, for we had a great deal of rain through white clover, and also during buckwheat. I secured 650 pounds of surplus honey from 20 colonies, spring count, and had only 9 swarms. My bees are in good condition for winter.

I enjoy working with the bees. They are a great study. MRS MARTIN SCHLEMMER.

Jefferson Co., Pa., Sept. 25.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to DR. C. C. MILLER, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Bee-Smokers and Smoker-Fuel

1. What kind of a bee-smoker does Dr. Miller use?

2. What is the best smoker-fuel? IOWA.

ANSWERS.—1. Corneil and Bingham. In one thing I want a smoker different from usual. I want a light spring. I don't think there's any good reason in wasting strength to use a smoker with a spring as heavy as those usually sent out.

2. A whole lot of them. We are using chips from the chip-yard. Not because they are the best in the world, although they are excellent, but because they are for us a little more convenient than anything else as good. Cotton-waste, burlap, hard wood, etc., are as good or better: but we can get the chips more easily. Something else may be better for you, because more easily obtained.

◆

Getting Bees to Adulterate Honey—Kinds of Italian Bees

I am a beginner, having started with 7 colonies last spring in box-hives, and have increased to 15. Some seem to be good and some not so good, but they may all be the same by spring—dead!

1. If honey is pure nectar from the flowers, then would not bees fed sugar syrup till they store it in the sections and cap it over produce adulterated honey? Or can the bees separate the part of honey there might be in the sweet and cast the rest away? It seems to me that the arguments are that extracted honey could be adulterated and could contain some glucose. What is glucose composed of? There is some kind of table molasses that bees will not bother with at all. I have mixed it with sugar and made syrup which they took gladly. Now I believe that the sugar and pancake syrup both were converted into honey. If either or both contained glucose and it was carried in, stored and capped, was it honey afterward? If so, was it adulterated?

2. If I should feed bees adulterated honey would I get in turn good, pure honey about pound for pound? I fed bees thin syrup one day, and the next morning found water running out of the hive, but with no sweet taste. It tasted, as nearly as I could tell, like rainwater. It had been extracted by the bees from the syrup.

3. How many strains of Italian bees are there? I see 3-banded, 5-banded, long-tongue, red clover, yellow, etc. Do they all mean 3 and 5 banded Italians?

4. Who is the largest bee-keeper in America, and where is he located? About what is his average number of colonies? ILLINOIS.

ANSWERS.—1. If you should get the bees to store either sugar or glucose, it would not be honey, or if you chose to call it so, it would be adulterated. Glucose, if chemically pure, is composed of much the same material as honey, but its cost is more than the price of honey. The commercial article contains impurities which make it unfit food for man or bee.

2. No, it would still be adulterated, and there would be considerable loss in feeding. The bees are always throwing off moisture from the food they consume, whether you are feeding them or not; and when the walls of the hive are cold enough the moisture condenses on them, often trickling out of the entrance.

3. I don't know how many kinds there are. If you had all the kinds in the world, you might start another kind by giving a different name to yours. Pure Italians are supposed to be those whose workers have 3 yellow bands.

4. I don't know; there are several who have a large number of colonies, and the number is so constantly changing that the one who had most last year may not have the most this year.

Referring to an omitted part of your letter, you are quite right to use just as little smoke as possible; and your plan of finding the queen by running the bees through excluder zinc, although well known, is good.

◆

Best Bees and Hive—Finding a Location

Before long I contemplate purchasing a farm "Out West," in the United States, and should like to know which are the best parts in which to purchase—where the land will increase in value, and yet be good for general farming, poultry keeping and bee-keeping. I have lived "Out West" before, but where I lived the land has gone up to such a value that I think there is nothing in it. My property here is on sale now. I shall buy no land or farm until I have seen it.

1. Which bee among the following is considered the best all-purpose bee, and which makes the best cross: Black, Carniolan, 3-banded Italian, and Cyprian?

2. Which hive do you consider the best all-purpose hive, that is, for producing comb honey, also extracted honey?

3. Which State among the following do you consider the best for all-purpose farming (and name a few places where good land can be bought that would be likely to go up in value): Missouri, Iowa, Kansas and Nebraska, and Oklahoma Territory?

4. Could you name two or three reliable land dealers? ENGLAND.

ANSWERS.—1. The Ialian seems to be mostly in favor as a general-purpose bee. There are some bees of mixed Italian and black blood that are good, and Prof. Benton speaks highly of a cross between Italians and Carniolans.

2. That seems to be more or less a matter of taste, and perhaps there is nothing better than the dovetailed, which is nothing more nor less than a plain Langstroth hive with lock-joint corners.

3 Probably there isn't very much difference. In each of them you'll find the desired conditions. Oklahoma being the newest, probably has the best chance for going up in price.

4. I don't know; that's outside the scope of a bee-paper; but advertisements of them abound.

◆

The Hive Question and a Beginner

A manufacturing business keeps me in the city throughout the day, but at other times I live in the country. In the mornings and afternoons there is opportunity for divers outdoor work, or rather recreation. For many years I have been interested in entomology, yet it was only last spring that I was taken with the fever to "grow bees."

May 19 a swarm of common brown bees was obtained from a farmer about 8 miles distant from my home; these were installed in a new 10-frame Langstroth (Root-Dovetail) hive; the bees prospered, and on June 15 a super was put on, the sections having narrow foundation starters. By Sept. 1, 4 sections were partially filled with honey, and some 10 or 12 others partially filled with comb, about one-fourth of which is drone-comb.

Frequent practice on this first hive dissipated "bee-trembles," and June 7 a second empty hive was bought, into which was put a 1-frame nucleus of bees and a select tested golden Italian queen. On each side of the nucleus were hung full sheets of foundation, the remaining frames being fitted with half sheets of foundation. Despite excessive rains during the summer (about 2 feet of rainfall) the yellow bees have prospered, and the hive now contains 5 frames of brood, 2 frames full of honey, and 3 frames being drawn out in snowy comb; there is promise that this colony will be very strong before cold weather in December.

After reading all available bee-catalogs, a copy of "Langstroth on the Honey-Bee" was purchased, and the American Bee Journal subscribed for. Then my troubles began; between the conflict of opinions in the book and Journal, aggravated by "original" views of neighbors, I am floored. One authority maintains that a deep frame is best, another contends for the shallow closed-end frame; neighbor B says my 10-frame hives are too wide, while neighbor C tells me that B knows nothing about bees, and so it goes. In the meantime the reading is continued, the bees themselves are watched, and I am beginning to have opinions of my own.

1. Well, in anticipation of next year I must soon determine the style of hive best adapted to this section of country; my conclusions based on reading, asking, and three months' observation of two hives, inclines me to the deep Langstroth (11¼ inches) with 10-frames and full sheets of foundation. This large hive full of hustling bees should yield (theoretically) excellent results. Do you think so, too?

2. Will any advantage follow the use of a telescope cover (as on the Langstroth-Dadant hive), furnishing about ½ inch air-space all around the super and upper edge of the hive-body, comb honey being wanted from some and extracted honey from other hives? The hives are to be left outdoors all winter, entrances reduced, and absorbent (dried maple leaves) put over the brood-chamber.

3. My hives are on stands one foot high. Is it better to have them rest on the ground?

4 Is the Alley method of queen-rearing suited to a novice? I know more about rearing beetles and bugs than about "growing bees."

5. If virgin queens are reared from the golden Italian queen, and drones from the so-called "Adel" Italian queen, will such a cross produce useful workers, or will there be a tendency towards prettiness at the expense of other and more valuable qualities?

While bee-keeping with me is not primarily a money-making venture, I want to start right. There is a fascination about it, and I continue to wonder why I never "took to the varmints (?)" before. VIRGINIAN.

ANSWERS.—I have read with no little interest the account of your perplexities on being initiated into the ranks of bee-keepers. You may just as well make up your mind that you will always meet such contradictions. For more than 40 years I've been at it, and there seem to be just as many contradictory views as ever. But it will hardly kill you. The fact that I am still alive, and outside the walls of an insane asylum, may reassure you. Indeed, I think that one of the fascinating things about bee-keeping is that very element of uncertainty; always some unsettled problem, always the search after the truth, which, in many cases, eludes one's grasp like a will-o'-the-wisp, but always with just enough success to make one eager to keep up the pursuit. I hope that your interest may increase rather than abate, and that this may not be the last time you are driven to this Question-Box.

1. I'm afraid you'll have to do some experimenting on your own account before you can have a satisfactory answer to your question. One thing in favor of such large hives is the freedom from swarming. Yet you can not count too strongly on that. At one time I had two "Jumbo" hives, and looked forward hopefully to good results the following year. Would you believe it? the next summer the first swarm I had issued from one of these Jumbo hives! For extracting you can count pretty safely on them; but as to comb there is need of experimenting *right in your locality*.

2. Yes, that space will be of value. Instead of air, it might be better to have it filled with cork-dust.

3. Better for the hives to be up; better for the operator to have them down. Also a little better for the bees to have them down. They can crawl in more easily when they drop to the ground heavily-laden in front of the hive. Try most of them down.

4. Yes, there's nothing difficult about it.

5. If both parents are good I see no reason why the cross should not be good.

Reports and Experiences

Very Poor Season for Bees

The season of 1905 started off in elegant shape. White clover came on early, and things were humming—especially the bees—and we got ready to swipe a large lot of sweet stuff. Things went on swimmingly, and we got the supers on—2, 3 and 4 to the hive—and the bees were just tumbling over each other to fill them, and we were leaning back in our easy chair thinking what a lot of honey we were going to have to sell, and planning how we would spend the money we got for it—when, all at once without warning, presto! and the honey-gathering stopped, and the bees got cross and hung around the hives and house looking for a scrap; and all this before we had gotten a single section of honey filled out!

White clover continued to bloom, but the bees paid no attention to it, and did no more gathering until the heartsease came on, and we have had so much rain and east wind that they have not done much on that. We will have a few hundred pounds of extracted, but no comb honey to speak of. Well, we suppose such is life in the West, and in other places as well.

The American Bee Journal is like Castoria or Mrs. Winslow's Soothing Syrup in a family of children—we can't get along without it. We would like to have it every day, but as we can't we will take it as often as we can get it. Long may it continue to enlighten the American public on the subjects of bee-keeping and—so-called manufactured comb honey.

J. M. LINSCOTT.

Gage Co., Nebr., Sept. 21.

A Summer's Experience with 3 Colonies

I desire to present a few facts from my experience this summer in the management of 3 colonies of bees, which appears to me to be important when the end aimed at is pounds of honey.

In the fall of 1904 I put into the cellar 2 strong colonies of bees in 10-frame hives; also one nucleus. One of the strong colonies had an Italian queen and the other a native queen; there was also a native queen in the nucleus.

About March 20 I took them out, all 3 in apparently fine condition. The 2 strong colonies built up rapidly, the Italian rather outstripping its darker rival both in honey and brood, when about May 20 each had honey and brood in 10 frames. I then gave each of them 10 frames in another brood-chamber, supplied partly with full sheets of foundation and partly with comb, moving a frame of brood into the upper story, making a 20-frame hive of each.

At about this time I noticed that the nucleus was not thriving, and an examination showed that they were queenless. I gave them a frame of brood from the Italian colony, and they were slow about starting queen-cells, but in due time I had an inferior looking queen, which I replaced a little later with a queen purchased in the South.

About June 20 I noticed, while examining the Italian colony, a frame in the upper brood-chamber with 2 uncapped queen-cells with an embryo queen in each—a most unwelcome condition of things, as I had decided to test the merits of those 2 strong colonies. Accepting what appeared to me to be inevitable (swarming), I decided to anticipate the job, and about a week later I brushed the bees into an 8 frame hive, gave them 6 frames with starters, and contracted the brood-chamber to meet the conditions, and put on a section super with queen-excluding zinc-board.

I was surprised while looking over the frames of brood in not finding more than the 2 queen-cells, which I had previously noticed. I destroyed one of the queen-cells and started a nucleus with the other, using 4 frames of brood and honey. The other 16 frames I put with the original nucleus, which I wintered over.

About July 20 the original colony of Italians, which were now confined to 6 frames, swarmed. I happened to be in the garden at the time. The old queen came out with the bees in a condition apparently too feeble to fly, and I found her crawling around on the ground near the entrance. I caged her and

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Finally, we have found a good Fountain Pen that is reasonable in price. The manufacturers of this pen say that if you pay more than $1.25 for other fountain pens, it's for the name.

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To a present paid-in-advance subscriber, we will mail this Fountain Pen free as a premium for sending us 3 NEW SUBSCRIBERS to the weekly American Bee Journal for one year (with $3.00). Surely, this is an easy way to get a good Fountain Pen. Or, if unable to get the new subscribers, and you want one of these Pens, forward to us $1.25 and we will send it to you by return mail. Or for $2.00 we will send to any one the American Bee Journal for one year and a Fountain Pen.

This Fountain Pen would be a splendid gift to a friend or relative. Why not order both Pen and Journal for some bee-keeper as a present?

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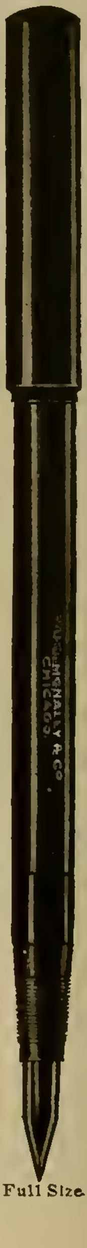

Full Size.

allowed the bees to return to the hive. It then occurred to me that the bees had been trying to supersede the old queen when they had 20 frames, and were still attempting to do the same thing, and, in addition, some swarming, as their quarters were too confined. An examination showed that they had another queen and 10 or 12 queen-cells. I brushed the 6 combs and provided the bees with 6 new frames with starters, and started another nucleus with the 6 frames of brood and honey taken away. Now this all resulted from the mistaken notion that the bees were getting ready to swarm when in the 20-frame colony.

Now as to results in honey-pounds: I got from this colony twice brushed about 50 pounds of section honey. From the original native-bee colony, which I built up by adding additional brood-chambers until it contained 50 Langstroth frames, about 200 pounds of extracted honey, and by the same management I believe I should have gotten 250 or 300 pounds from the Italian colony, as they appear to me to be superior to their darker sisters.

To the credit of the Italian colony I have 2 nuclei, one of which I shall have to feed this fall.

I will say in explanation of that 50-frame colony, that I do not own an extractor, and was compelled to build them up in that fashion to meet their increasing needs: however, I believe there is no plan so likely to bring about good results as this building-up plan, by the addition of more brood-frames and the consequent space for expansion and storage thus obtained; and, conversely, the 8-frame brood-chamber and super, with its swarm-engendering proclivities, is the plan most commonly pursued with results in honey-pounds practically *nil* in this locality.

A. E. Burdick, M.D.

Palo Alto Co., Iowa, Sept. 19.

CONVENTION NOTICES.

The National Bee-Keepers' Association holds its annual convention at the Revere House, corner of Clark and Michigan streets, in Chicago, during the Fat Stock Show, when exceedingly low rates may be secured on the railroads. The dates for the meeting are Dec. 5, 6 and 7. Rates at the hotel are 75 cents for a room alone, or 50 cents each, where two occupy the same room. Meals are extra, or they may be secured at near-by restaurants.

W. Z. Hutchinson, *Sec.*

Illinois.—The annual meeting of the Northern Illinois and Southern Wisconsin Bee Keepers' Association will be held at Rockford, Ill., Oct. 17 and 18, 1905. All those interested in bees and honey are requested to attend, as no pains will be spared to make this meeting the most successful of its kind ever held

J. W. Johnson, Sec.

Minnesota-Wisconsin.—The annual meeting of the Southeastern Minnesota and Western Wisconsin Bee-Keepers' Association will be held at the County Commissioners' Rooms in the Court House at Winona, Minn., on Oct. 24 and 25, 1905, at 10 a.m. of each day. All bee-keepers invited with their wives, and help to make the convention a success.

Joseph M. Reitz, Sec.

W. K. Bates, Pres.

Georgia.—The Southern Bee-Keepers' Association will hold a meeting in Atlanta, Ga., during the State Fair, Oct. 20, at 10 a.m., on the Fair Grounds, at the apiarian exhibit. All bee-keepers and those interested are invited to attend and take part. Judson Heard, Sec.

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Full information regarding all kinds of BEE-KEEPERS' SUPPLIES. Best goods. Latest improvements. Danzenbaker Hives and Fixtures. Prompt shipments. John Nebel & Son Supply Co., High Hill, Mo, 8Dtf

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Only 50 cents each.

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How the Canadians Like Moore's Strain of Italians

J. L. Byer, Markham, Ont., Can., says:

"I use a very large hive and have been getting Italian stock from different breeders, and yours are the only Italians that fill up my big hives with rousing big colonies. They winter splendidly, out-doors, are hustlers after honey, and not one queen has yet cast a swarm."

Untested Queens........................75c each; six, $4; dozen, $7.50
Select Untested........................$1.00 each; six, $5; dozen, $9.00

Descriptive circular free. I am now filling orders **by return mail**, and shall probably be able to do so until the close of the season.

29Dtf **J. P. MOORE, Rt. 1, Morgan, Pendleton Co., Ky.**

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YOU may hold a policy and BOND.

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3D28t A. S. RENNIE, Mgr., 614 Marquette Bldg., Chicago, Ill.

For the balance of the season of 1905

Standard-Bred Untested Italian.... Queen, 75 cents

2 for $1.40, or 4 or more at one time, 60 cents each for balance of season. The Weekly American Bee Journal one year (either new or renewal subscription) with one of these fine Queens—both for $1.50. Better have one or more of these Queens. They give satisfaction. First come, first served.

An Untested Italian Queen-Bee FREE as a Premium

For Sending One New Subscriber

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As has been our custom heretofore we offer to mail a fine Standard-Bred Untested Italian Queen to the person who complies with the following conditions, all of which must be strictly followed:

1. The sender of a new subscriber must have his or her own subscription **paid in advance** at least to the end of this year.

2. Sending your own name with $1.00 for the Bee Journal will not entitle **you** to a Queen as a premium. The sender must be already a paid-in-advance subscriber as above, and the new subscriber must be a **NEW** subscriber; which means, further, that the new subscriber has never had the Bee Journal regularly, or at least not for a whole year previous to his name being sent in as a new one; and, also, the new subscriber must not be a member of the same family where the Bee Journal is already being taken.

We think we have made the foregoing sufficiently plain so that no error need be made. Our Premium Queens are too valuable to throw away—they must be **earned** in a legitimate way. They are worth working for.

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Best Goods in the World

Best Bee-Hives, Sections, Comb Foundation, and everything the bee-keeper needs. Now is the time to buy for next season's use. **Lewis' Goods at factory prices.** Catalog free. Cash orders at catalog prices on such goods as mentioned in special list.

Before November..........9 percent discount	Before February ....6 percent discount
" December..........8 " "	" March ....5 " "
" January ....7 " "	" April ....3 " "

Ask for special list now, free.

Honey-Packages for Marketing Honey

Such as Shipping-Cases, Tin Cans, Buckets, **Glass Jars with patent spring sealers and glass stoppers;** regular Glass Fruit-Jars, etc. Sample cases for sending samples of extracted honey by mail. Special prices on Glass Honey-Jars and Tin Buckets.

New Crop Extracted Honey

We have an abundance of the finest honey in the world. Can ship in cans and barrels. If you can't supply the demand in your locality write to us at once and tell us how much you can use; 10 cents for sample by mail, but we return the 10 cents with your first order.

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Write to-day and tell us what you want in our line, and how much. **Best service, lowest freight rates, satisfaction to all.**

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We can ship by **return freight** at the following prices:

½-lb. Jars with corks—1 case of 21 doz. for $5.50; 3 cases, $15.50.

¾-lb. Tiptop Jars—1 case of 14 doz., for $5.25; 3 cases for $15.

1-lb. Tiptop Jars—1 case of 12 doz., for $5; 3 cases for $14.

Second Hand... Comb Foundation Mill

We have for sale a 6-inch Second-Hand Comb Foundation Mill. Used scarcely any; good as new. If interested write for price.

YORK HONEY AND BEE SUPPLY CO.
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141 Ontario Street, - CHICAGO, ILL.

If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published, send $1.20 to

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Liberal Discounts to the Trade.

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with lice on poultry. **Schild's Lightning Lice Killing Machine** instantly removes them from tiniest chick or fat gobbler. 3 sizes. Also Poultry Bits, Lice Murder, Lightning Lice Killing Powder, etc. Catalog free.
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8 Frankfort St. Cleveland, O.

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WE SELL ROOT'S GOODS IN MICHIGAN

Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. **Beeswax Wanted for Cash.**

M. H. HUNT & SON,
BELL BRANCH, WAYNE CO., MICH

Big Discounts on Bee-Supplies

The following discounts apply on all orders except honey-packages for current use:

For cash orders before Oct. 1—10 percent

Nov. 1...... 9 percent	Feb. 1 ...... 6 percent
Dec. 1 ...... 8 "	March 1.... 4 "
Jan. 1 ...... 7 "	April 1 ..... 2 "

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FOR SALE HONEY-JARS

The No. 25 Honey-Jar, Porcelain Cover, Metal Screw Cap, absolutely tight, holding One Pound of Honey, Net, in shipping-cases of one gross each:

1 gross lots............$4 50 per gross
5 " " .... 4.00 "

Also in strong **RE-SHIPPING CASES** of two dozen each, heavy corrugated partitions, sides, top and bottom—a perfect protection—

1 case lots ....$1.00 per case
5 " .... .95 "
10 " .... .90 "

Eight-ounce Tumblers, tin caps, 3 dozen in re-shipping case:

5 case lots, per case, 3 doz........85c
10 " " " 80c
20 " " " 75c

F.O.B. New York. Prompt shipment on receipt of order.

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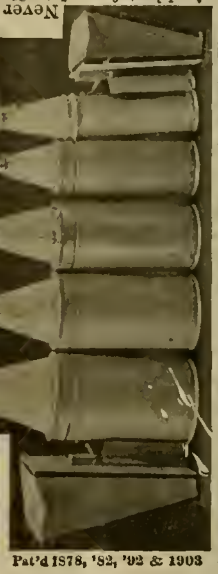
4 Largest Sizes Soot Burning

And last from 6 to 21 years
Never Go Out



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Tin 4-in. Smoke Engine $1.50. 3½-inch $1.10. 3-inch $1.00. 2½-inch 90c. 2-inch Wonder 65c—per mail.

Sent on receipt of price per mail.

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OTISVILLE, PA., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. FRED FODNER.

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Is what we are making for our customers.

— DOVETAILED HIVES AND SHIPPING-CASES —

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Corner that is perfect is made by us. It can not be otherwise. The end rabbet runs by and nails to the sides. Can't split off nor warp. **Perfect in every way.** Lumber of the best quality. **DISCOUNT**—well, it will **ASTONISH** you. All kinds of **Supplies.** Write your wants.

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10 Percent Discount

We will allow you the above Discount on all Orders accompanied by Cash during October. Send for our Catalog.

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Shipping-Cases PLENTY FOR ALL

Made of Michigan white pine; 24-lb., $13; 12-lb., $8; 20-lb. Danzy, $11 per 100; less than 100 lots, ½c more each; 3-in. glass, 1c each more; No. 1 Sections, $4; No. 2, $3.50 per 1000. All kinds of Supplies kept in stock. Send for list. **W. D. SOPER.**
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IN 60-POUND CANS

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YORK HONEY AND BEE SUPPLY CO.
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NEW COMB HONEY-CROP OF 1905
We believe it would pay those having it in car lots or otherwise to write us. Give us your lowest spot cash prices, and fully describe the goods and style of package; when you can ship, etc. We handle more of these goods than any other firm in the U S. Yours for business,
THOS. C STANLEY & SON. Bees and Honey
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WANTED

Fancy White Comb Honey in Non-Drip Shipping-Cases; also White Clover Honey in cans and barrels. Please send samples and state your lowest price, delivered here. We pay **spot cash** upon receipt of goods.

GRIGGS BROTHERS
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FOR SALE
Until further notice, finest quality new crop California Water White White Sage and Light Amber **HONEY** in 60-lb. tins, 2 in a case; new cans and new cases Write for prices and samples, and state quantity you want.
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R. A. BURNETT & CO.,
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Headquarters for Bee-Supplies

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Freight rates from Cincinnati are the lowest,
ESPECIALLY FOR THE SOUTH, AS ALL FREIGHT NOW GOES THROUGH CINCINNATI.

9 Percent Discount
For Cash Orders Received in
OCTOBER

This applies to all goods with exception of Shipping-Cases and other Honey-Packages for current use.

At Root's Factory Prices

C. H. W. WEBER CINCINNATI ...OHIO...
Office and Salesrooms, 2146-48 Central Ave. Warehouses. Freeman and Central Aves.

Honey and Beeswax

CHICAGO, Oct. 5.—The demand for comb honey is about as usual for the season of year. Offerings from the surrounding States are fully equal to past season, but that from Colorado and the Middle Western States are not. No. 1 to fancy white comb honey sells at 13@14c, with an occasional sale at 15c; the off grades embracing crooked combs, etc., sell at 11@12c; amber grades difficult to place at 9@10c. Extracted, white, 6@7c, according to kind, body and flavor and package; ambers 5½@6½ cents. Beeswax selling upon arrival at 30c if clean; off grades about 2c per pound less,

R. A. BURNETT & CO.

CINCINNATI, Oct. 6.—Reports from different parts of the country give evidence of an almost total failure in the comb honey crop, excepting the points in the North. We are selling this Northern comb honey at from 14@16 cents per pound, by the case. The demand for extracted honey is about equal to the receipts, which are good. We continue to sell amber in barrels at 5¼@6c; white clover at 6½@7½c. For beeswax we are paying 30c per pound, cash, delivered here.

(We wish to call the attention of the producer to the above honey quotations, who mistakably expects to receive these prices for his product. The above are our selling prices.)

THE FRED W. MUTH CO.

PHILADELPHIA, Sept. 21.—There seems to be an unusually large quantity of comb honey offered in the market at this time and prices for new goods are somewhat weak. We find small lots of bee-keepers in the vicinity offering it at 'most any price, regardless of the actual value. Honey has been sold in Philadelphia at the following prices during the week: Fancy, 13@16c; No. 1, 11@14c. Extracted, amber, 5½@6½ cents; white clover, 6½@8c. Beeswax, firm, 28c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

TOLEDO, Aug. 18—The market on comb honey at this writing is practically the same as last; however, honey is being offered quite freely, and this has a tendency to decline the price. On account of the heavy receipts of fruit there is no great demand for either comb or extracted at present. Fancy white clover in a retail way brings 15c; No. 1, 14c; little demand for amber. Extracted, white clover, in barrels, 6@6½c; in cans, 7@7½c: amber in barrels, 5@5¼c; in cans, 6@6½c. Beeswax, 28@30c. GRIGGS BROS.

CINCINNATI, O., Oct. 7.—The nice weather holds back the demand for comb honey. Crops seem to be exceedingly short and producers in the West keep the price high. We quote fancy water-white comb honey No. 1 white clover from 14@16c; No. 2 from 12½@14c. Extracted seems to be more plentiful. In barrels, light amber, 5¼@5½c; in cans, ½c more. White clover from 7@8c. Beeswax, 26c.

C. H. W. WEBER.

INDIANAPOLIS, Sept. 2—There is a good demand for strictly fancy white comb honey, demand and supply running about even. Demand for lower grades of comb honey not good. Numerous shipments of honey arriving, but no one producer seems to have very great quantities to offer. I quote fancy white at 14@15c; No. 1 in poor demand at 12c, and amber dull at 10c. Best grade extracted brings 8@9c in 60-lb. cans; amber slow at 5c. Beeswax, 28@30c.

WALTER S. POUDER.

NEW YORK, Sept. 22.—New crop is beginning to arrive quite freely from New York State and Pennsylvania, and is in fair demand at 14c for fancy white, exceptionally fine quality may bring 16c; 13c for No. 1 white, and 11@12c for No. 2 white and amber; no buckwheat on the market as yet. Extracted, in good demand at last quotations. Beeswax, firm and scarce at 29@30c. HILDRETH & SEGELKEN

ALBANY, N. Y., Sept. 21.—Honey demand improving here as the season advances, and as next month is the best month we look for good prices. Buckwheat comb is scarce; that is, straight buckwheat. We quote fancy white, 15c; No. 1, 14c mixed, 13c; buckwheat, No 1, 13c; mixed 12@12½c. Extracted, white, 7@7½c; mixed, 6½@7c; buckwheat, 6½ cents. Beeswax, 28@32c. H. R. WRIGHT.

SAN FRANCISCO, Sept. 20.—White comb, 1-lb. sections, 9@10 cents; amber, 7 8c. Extracted, water-white, 4¼@5½c; white, 4@4¼c; light amber, 3¾@4 cents; amber, 3@3½c; dark amber, 2½@3c. Beeswax, good to choice, light, 25@26c.

The comb honey market is firm at 8½c to 10c a pound. Southern California's output this year will approximate 175 car loads. Last year's crop was practically nothing, and present prospects are for higher prices. With the market practically cleaned up last spring, coupled with the fact that the honey crop is light in all Eastern producing States, the honey men of southern California may reasonably look for better prices the coming fall and winter. The present market price for extracted honey is around 5c. The crop estimate above given means about 125,000 cans of extracted. Of comb honey southern California will have, it is thought, not more than 15 carloads. While California will have about the largest crop in many years, there are some localities where the bees have done practically nothing. Arizona is nearer to a honey failure this year than in 20 years. The crop has not been so light throughout the East in a decade, while Texas is said to be only within 60 percent of its normal production.

JUST THINK OF IT!

LEWIS' NO. 1 FINE WHITE POLISHED SECTIONS

1,000	@$4.55	per thousand
2,000	@ 4.43	"
3,000	@ 4.32	"
4,000	@ 4.20	"
5,000	@ 4 09	"
10,000	@ 3.86	"
25,000	@ 3.64	"
50,000	@ 3.45	"

IF ORDER WITH CASH IS SENT IN THIS MONTH

as these prices are net after October discount is deducted.

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Send for Catalog Containing Discounts and List of Agents

G. B. LEWIS CO., Watertown, Wis.

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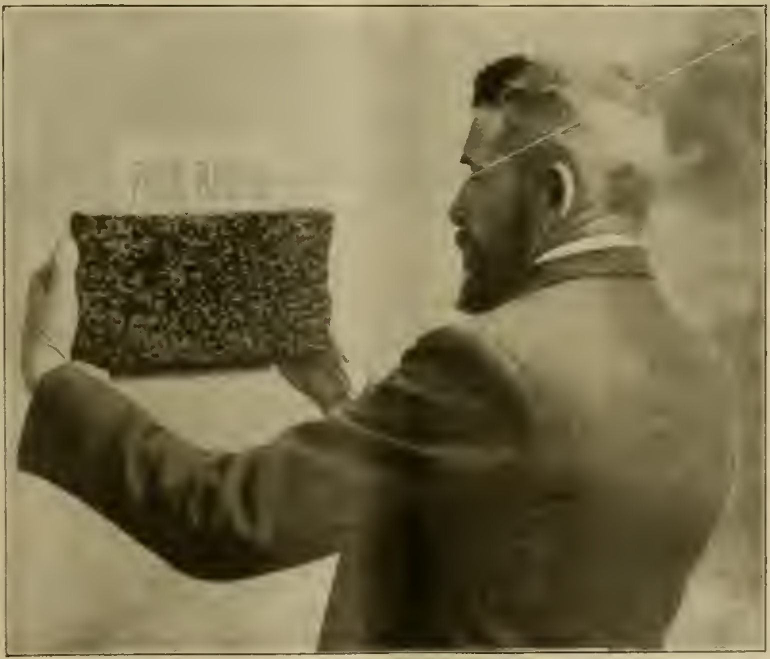
AMERICAN BEE JOURNAL

WEEKLY—$1.00 A YEAR
Published by GEORGE W. YORK & CO., 334 Dearborn Street

45th Year CHICAGO, ILL., OCTOBER 19, 1905 No. 42

WEEKLY



Mr. N. E. France Showing How to Hold a Foul-Broody Frame at the proper angle so as to see the disease on the lower side of the cells—the top of the frame being tipped toward him.
(See page 729)

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY
GEORGE W. YORK & COMPANY
334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec05" on your label shows that it is paid to the end of December.

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Objects of the Association

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00

General Manager and Treasurer—
N. E. FRANCE, Platteville, Wis.

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(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

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1. Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.
2. Any honey dealer, bee-supply dealer, bee-supply manufacturer, bee-paper publisher, or any other firm or individual, may become a member on the annual payment of a fee of $10, increased by one-fifth of one (1) percent of his or its capital used in the allied interests of bee-keeping.

GEORGE W. YORK, Manager,
334 Dearborn St., CHICAGO, ILL.

Italian Queen-Bee Free as a Premium

To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us ONE NEW subscription with $1.00 for the Bee Journal a year. Now is the time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.

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$50 to $100 per month salary assured our graduates under bond. You don't pay us until you have a position. Largest system of telegraph schools in America. Endorsed by all railway officials. OPERATORS ALWAYS IN DEMAND. Ladies also admitted Write for Catalog.

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Your Bee-Hives, Sections, Shipping-Cases, Berry Boxes, and Crates for the coming season. By sending us a list of goods wanted, we can save you money.

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Root's Goods at Root's Prices

Everything used by Bee Keepers.
POUDER'S HONEY-JARS. Prompt Service.
Low Freight Rates. .·. .·. .·. **Catalog Free.**

If you wish to purchase finest quality of **HONEY** for your local trade, write for my free monthly price-list of honey.

Why not secure your **BEE-SUPPLIES NOW FOR NEXT SEASON'S USE**, and avail yourself of the following very liberal discounts? Goods all **Root Quality.**

	Percent	
For cash orders before Oct. 1	10	For cash orders before Jan. 1..7 percent
For cash orders before Nov. 1	9	For cash orders before Feb. 1..6 percent
For cash orders before Dec. 1	8	For cash orders before Mar. 1..4 percent
		For cash orders before Apr. 1..2 percent

WALTER S. POUDER,
513-515 Massachusetts Ave., INDIANAPOLIS, IND.

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DITTMER'S FOUNDATION IS THE BEST

Now is the time to prepare for next season.

If You Want to Save Money on Foundation, Working Wax for Cash, and on a full line of **SUPPLIES**, write for prices and discounts, and samples of our Superior Foundation.

E. Grainger & Co., Toronto, Ont., Agents for Canada.
The Bee and Honey Co., Beeville, Tex., Agents for Texas.

GUS. DITTMER, - Augusta, Wis.

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The time to buy Bee-Supplies is NOW. After the season's rush is over we make special discounts from our regular low prices. Send us a list of your needs in this line and we will make you a price that will convince you of our statements.

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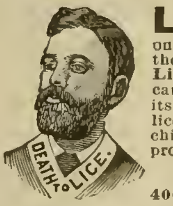
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◆

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We wish every reader of the American Bee Journal to become acquainted with **GLEANINGS IN BEE-CULTURE.** We extend a cordial invitation in our offer to send you the paper 10 weeks for 10 cents.

There is no bee-paper in the world like Gleanings. Its aim is to meet the needs of every bee-keeper everywhere, and it does it. Whether you own one colony or a thousand or are merely interested you cannot afford to miss a single number. Gleanings is progressive. Every number is an improvement over the last.

Contributors

It is useless to state that GLEANINGS excels in this point. Regular departments are edited by Dr. C. C. Miller, G. M. Doolittle, Prof. A. J. Cook, J. A. Green and Louis Scholl. These names speak for themselves for they are the best writers of the day. Every issue contains articles from the pens of the best bee-keepers all over the land. A list of them would be the catalog of the most successful bee-keepers the world over. We will soon begin a series of remarkable articles by E. W. Alexander. We are safe in saying a higher price was never paid for an article of this class than we paid for a single one of this series. Every one of them will be worth hundreds of dollars to bee-keepers.

Half-Tone Illustrations

During the past summer we have had a special artist to take photographs for us. He has traveled on our account alone the past summer over 4000 miles and we can promise some very fine pictures. Many of the Second Prize Photo Contest, American and Foreign, will appear soon. Our engravings are made by the very finest engravers in the United States. Just this wealth of illustration doubles the value of the paper.

Advertisements

Gleanings prides itself on the clean class of advertisements it carries. Its subscribers show their appreciation of the fact by their liberally patronizing them. There is no better medium in the United States for those catering to the needs of the bee-keeper. We now print 25,000 copies and yet with our special edition (Dec. 15, 40,000) our old rates hold good which were based on 20,000 circulation. Gleanings gives its subscribers and advertisers full measure, pressed down and running over.

December 15th Issue

We are pleased to announce that extensive plans are now under way for a Special Christmas Issue of Gleanings. It is planned that this issue shall far exceed in its wealth of contributed articles, its half-tones and its cover design than anything that heretofore has been attempted in bee-keeping literature. The cover is to be designed and printed by one of the best color printing establishments in the United States. The design is something unique and beautiful indeed. This issue will contain nearly 100 pages, and 40,000 copies will be printed, making a bee-keepers' magazine that compares favorably with any magazine of the present day.

Subscribe

When you have read this notice take up your pen and tell us to send you **Gleanings Ten Weeks** and enclose **Ten Cents,** in coin or stamps. Don't put it off. The magnificent Christmas Number alone will be worth 25 cents to any bee-keeper. We don't promise this number to any but subscribers. Don't put this matter off for you will never be able to spend 10 cents to better advantage.

THE A. I. ROOT CO., Publishers, Medina, Ohio.

ESTABLISHED IN 1861

THE AMERICAN

BEE JOURNAL

OLDEST BEE-PAPER IN AMERICA

(Entered at the Post-Office at Chicago as Second-Class Mail-Matter)

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor

CHICAGO, ILL., OCTOBER 19, 1905

Vol. XLV—No. 42

Editorial Notes and Comments

The Chicago National Convention

The program being arranged for the National Bee-Keepers' convention, to be held here in Chicago Dec. 5, 6 and 7, is one that it will pay to hear all the way through. Some exceedingly important subjects are to come up for discussion and action, and so it is hoped that it may be a very representative gathering of bee-keepers of the United States, Canada and Cuba.

Some may feel that they can not afford the expense. Some years ago even so experienced and successful a bee-keeper as Mr. C. P. Dadant said he felt well repaid for attending the National convention held in St. Joseph, Mo., just for one thing learned about wintering bees. Last year Mr. and Mrs. Gus Dittmer, of Wisconsin, told the writer that the Chicago-Northwestern convention, which they were then attending, was a very profitable investment for them. And so it goes.

Come to the National convention in Chicago, Dec. 5, 6 and 7, and get new inspiration besides several other things that may not be estimated in dollars and cents.

Loss from Outdoor Feeding

J. A. Green says in Gleanings in Bee Culture that a loss of bees that was serious occurred in outdoor feeding upon the occurrence of a cold, drizzling rain last spring. Although he put out no feed on that particular day, he found to his disgust that the bees came out after the feed as usual.

> "They hovered around the feeders until they became wet and chilled. Bees were scattered all over the ground, and festooned over everything near the feeders that would support them, until many thousands of them perished. The losses from that source probably came near balancing the good done by the stimulative feeding. The loss of bees probably would not have been so great if the feeding had been done under an open shed so that the feeders would have been sheltered from the rain. If this had been done, especially if the feed had been kept warm, the bees could probably have made their way through the rain without much loss."

Carload of Honey—Queen-Cage Cardboards

We have received the following from Dr. Miller:

> Our genial Afterthinker, to whom we are all so much indebted, expresses doubts as to the 70-carloads-of-honey story. It isn't clear just what is the ground of his skepticism, unless it would be that it would take the output of 560 apiaries with 5 tons each. What he says appears on page 699. I suppose his skepticism will be about 7 percent stronger when in the same number, 5 pages earlier, he reads of 75 carloads being purchased by the same company. Incidentally it may be noted that "San Franciscan" estimates a carload at 20 tons, and Mr. Hasty at 40. In this locality the capacity of a freight car is not over 30 tons. Isn't there some way by which we can get some definite information besides what "they say?"
>
> On the same page, Mr. Hasty says, "With cardboard over the candy you run heavy risks of having the queen not liberated at all." There's no heavy risk "in this locality," Mr. Hasty. I've used cardboard over candy in hundreds of cases, and I think I never had more than 2 or 3 cases in which the cardboard was not gnawed away. I'm wondering whether those heavy risks are not based on placing the cage over top-bars. I always place it between brood-combs.
>
> C. C. MILLER.

We are under the impression that a carload of honey usually runs from 12 to 15 tons. We think there are not many carloads of honey that weigh as much as 20 tons. If we are wrong in this we will be glad to publish a correction.

Winter Packing with Newspapers

Editor Root, in Gleanings in Bee Culture, says that Vernon Burt, last winter, successfully wintered 300 colonies of bees in the following manner:

> "Early in the fall he sees that his colonies are well supplied with sealed stores. He uses the Danzenbaker hive; and if the cluster can be crowded into one section, one section is given. If they require two, of course they are allowed to have them. The same super cover that is used to cover the super for comb honey is put on top of the brood-nest. This the bees seal down hermetically. On top of this cover are placed several thicknesses of newspaper laid out flat. On top of the paper is placed a shallow chaff tray containing chaff or any other equally good packing material, to the depth of 3 or 4 inches. The paper sticking out in all directions is neatly folded down around the sides of the hive. Over the chaff tray, and fitting snugly against the paper folded against the inner hive, is crowded a deep telescoping cap made of $\frac{3}{8}$ lumber, with a tin roof. The actual packing material on top is some 4 or 5 inches thick. The sides of the hive are protected by the folds of paper and the outer case. This outer case comes down to within about one inch or so of the bottom-board. As the heat naturally rises inside of the hive, there is no need of making a double-wall bottom-board, nor of protecting the bottom edges of the hive."

Bee-Insurance

By paying 2 cents per colony, British bee-keepers are insured against claims for damage done by their bees.

National and Other Conventions

It is almost impossible to expect that any annual meeting of the National Bee-Keepers' Association would not conflict with some other convention. And so it has come to pass that the Minnesota State convention meets Dec. 6 and 7, at the same time as the National here in Chicago. This will of course prevent many good Minnesota members from attending the National convention.

But why not change the date of the Minnesota meeting? It could likely be more easily done than changing the date of the National convention, especially as it is more important that low railroad rates be in force for the National than for any State convention.

It seems to us that the National convention should always be given "the right of way" in preference to that of any local convention.

Our Convention Reports

We have received the following in reference to the Chicago-Northwestern convention report now appearing in these columns:

> MR. EDITOR:—Never before was I so impressed with the value of a good report of a bee-keepers' convention as in reading late numbers of the American Bee Journal, containing the report of the proceedings of the last Chicago-Northwestern convention. The report is so full and so good that it is the next thing to being present at the convention in person. The social feature is impor

tant—meeting old friends and forming new acquaintances, seeing the faces of those whose names have become familiar from reading the bee-journals, and watching the animated features of those who are speaking.

Yet in one respect reading the printed report has an advantage over actual attendance. Sometimes one's attention is distracted and some of the proceedings are missed; one can not go back to hear it over again in the convention, but there is nothing to hinder reading any part of the report over again. Often, too, when so much is crowded into one, two, or three days at a convention, the mind becomes wearied so that there is danger of some good points being lost, or at least their full bearing not properly understood for lack of time to think them over. All the time necessary can be taken in reading, and one can stop as long as one chooses at any given point, making the report of value even to those who were at the convention.

Thanks for such good reports.

ONE WHO WAS THERE.

Convention reports have always been one of the strong features of the American Bee Journal. There is much of interest and value that can be had in no other place except at conventions of bee-keepers. Many who are induced to talk at conventions would never think of writing for the bee-papers. And often such people are the very ones who know a great deal about the successful management of bees from years and years of actual experience.

While there may be somewhat of repetition in the reports of conventions, still there is a spice and variety about them that no other kind of reading-matter furnishes.

We expect to continue to give as many convention reports, and as correct ones, as possible, for we believe they are appreciated by the great majority of our readers.

◆

Bee-Keepers' Licenses

In this country there is nothing to hinder one from locating an apiary anywhere, only providing one can buy or rent enough ground to locate the apiary. In Australia it is a little different, as witness the following from a report of the meeting of the Victoria Apiarists' Association, as published in the Australasian Bee-Keeper:

> Mr. W. L. Davey said that "it rests with the members of this Association whether they are satisfied with the license as at present. The Government has allowed others to take up licenses alongside members' sites. This is not fair; we want some protection in this direction from the Government."
>
> Mr. Cute suggested that the Government be asked to pass a law not to have licenses issued nearer than 2 or 3 miles apart. His branch, Wartook, was in favor of 3 miles apart.
>
> Mr. A. Anderson moved: "That a ¼*d* per acre for a radius of one mile on each side of the apiary, and two-sixths for the license" be offered to the Government. Mr. Howard seconded. Carried.

There would probably be some bitter feeling if anything in the shape of a license should be required for occupying Government lands with bees in this country. And yet there are likely not wanting those who would be glad to pay a license even for placing bees on their own lands, if thereby they could be made secure against interference in their pasturage.

Maeterlinck's "Life of the Bee."—We have a few copies of this book, price, postpaid, $1.40; or with the American Bee Journal one year—both for $2.00, as long as the books last. It is a cloth-bound book, and has 427 pages.

Miscellaneous News Items

Mr. F. Greiner, of Ontario Co., N. Y., writing us Oct. 9, said:

> "The honey season has not been very favorable, still we have some honey; average about 30 pounds of comb. Some bee-yards did much better than others."

◆

Mr. Morley Pettit, of Ontario, Canada, wrote us Oct. 11:

> "I finished extracting buckwheat honey a week ago. My output this year is, all told, about 40,000 pounds. Not bad for a young Canadian."

Well, we should think that was *very* good. Who, over the line, can make a better report than that of Mr. Pettit? He is one of the younger generation of Canadian bee-keepers. Can any of the "old timers" show a better record for the season of 1905?

◆

"Advanced Bee Culture."—The new edition of this book, by W. Z. Hutchinson, to be out next month, is a most beautifully gotten up bee-book. It is printed on heavy, enameled paper, profusely illustrated with beautiful halftone engravings, and the front cover emballished with a green vine of clover—a golden bee sipping nectar from one of the snow-white blossoms. Most important of all, however, is the simplicity and freshness, the inspiration and real *helpfulness* of its contents. From his years of experience as bee-keeper and editor, Mr. Hutchinson tells in plain, simple language, what he believes to be the most advanced methods of keeping bees for *profit*, from early spring until the end of the year. The book is almost wholly re-written, and contains nearly twice as much matter as did former editions. In short, every man who would make the most money out of bee-keeping as a business, *must* have this book.

The price, postpaid, is $1.20; or we will club it with the American Bee Journal one year—both for $2.00. Send all orders to the office of the American Bee Journal.

◆

Kretchmer Mfg. Co. at Council Bluffs.—Only those who have had experience in moving a factory or manufacturing plant know what it means to transfer it to another place. The Kretchmer Mfg. Co. have just been doing that stupendous thing, as they have gone from Red Oak, Iowa, to Council Bluffs, Iowa. They have also added a little over 50 percent to their working capital. The reasons for moving are given in a printed notice which reads as follows:

> "The ever increasing demand for our goods necessitated the erection of a larger factory, with better shipping facilities.
>
> "Council Bluffs, Iowa, is the greatest Western railroad center, with 15 railroads radiating in every direction, and freight-rates for the West *the same* as from Omaha. Here we have just completed the largest factory of its kind in the West—modern, up to date in every detail. As the oldest manufacturers of bee-keepers' supplies (over 42 years' actual experience), we have gathered many valuable ideas for the erection of a complete factory, fitted with the best labor-saving machines, many constructed expressly for our work, operated by 10 electric motors, and all in charge of experienced workmen, nearly all of whom have been with us for years.
>
> "A railroad track not only runs to the doors of our factory and warehouses, but also through the entire length of lumber sheds and yards, so that carload shipments can be loaded or unloaded direct into warehouse and factory. Paved streets, right to the door of the factory, enable us to haul immense loads of goods for local shipments, with little expense for drayage."

The Kretchmer Mfg. Co., now of Council Blugs, Iowa, are among our many regular and reliable advertisers. We wish them continued success in their new location.

◆

The Truth About Honey.—A few changes have been made in the reading of the Comb Honey Guarantee Circular for shipping-cases gotten up by The Honey-Producers' League, so that it will be suitable for bee-keepers to use in their correspondence, putting one in with every letter they write. It is headed, "The Truth About Honey," and is printed on both sides of a light manilla cardboard. It is sent postpaid in lots of 50 for 10 cents, 100 for 20 cents, etc. Every bee-keeper should use it, as it will undoubtedly help to popularize the use of honey.

The Guarantee Circulars for use in shipping-cases should be used by every bee-keeper who sells comb honey by the case. These circulars are the same price—10 cents for 50 copies, postpaid.

Send all orders to this office.

◆

A Large Apiary.—Ventura Co., Calif., claims one of the largest apiaries in the world, comprising some 2000 colonies of bees. It is owned by one Mendleson, a pastmaster in handling bees. We were informed by Mr. McDonald, who owns an apiary adjoining that of Mendleson, that the latter's income this season, over and above his running expenses, will be $10,000.—Rural Californian.

Comb Honey Not Machine-Made.—We have a fair supply of the typewritten letter on this subject, which appeared in the Chicago Daily News of June 21, 1905. It is just the thing to have published in every bee-keeper's local newspaper. We mail it for a 2-cent stamp. Better order several copies, and request as many newspaper editors to publish it. It will certainly be a good thing for both the reading public and the bee-keepers.

◆

Comb Honey Guarantee Circulars.—These were gotten up by The Honey-Producers' League, to be put into shipping-cases before nailing them up for market. They are mailed for only 10 cents for 50—practically cost price. Every bee-keeper who has any honey to sell by the case should use these circulars. They will help to inspire confidence in the genuineness of comb honey. Send all orders to this office.

Contributed Special Articles

Bee-Keeping on a Large Scale

BY ADRIAN GETAZ

THE question is sometimes asked whether a bee-keeper ought to add some other occupation to the keeping of a moderate number of colonies of bees, or increase the number of colonies by adding apiaries. I will not undertake to discuss that question this time, but take for granted that the decision is to keep more bees and have a number of out-apiaries.

I suppose that it is admitted that the income from a single colony is necessarily limited, and at the present prices of honey not very great; and that if anything like a liberal reveneu is to be derived from bee-keeping alone, a large number of colonies is the first requisite. With the large number comes the necessity of adopting short cuts, and what might be termed a method of wholesale manipulation. In this paper I propose to describe briefly the methods or management followed by some of our largest bee-keepers The information I have condensed here is chiefly taken from the articles lately published on the same subject in the Bee-Keepers' Review.

MR. E. D. TOWNSEND, OF MICHIGAN.

Mr. Townsend believes in using large hives, not less than 10 Langstroth frames, anyway. The colonies are wintered out-of-doors, either in chaff hives or packed in chaff-packing cases. Each colony should have enough honey in the fall to go through the winter and build up freely during the spring. He estimates 25 to 30 pounds. He says that with plenty of honey in the spring the bees will build up better than with less, and all the spreading of brood-nest and stimulative feeding that could be conjured.

The upper stories are put on about June 1; that is, about two weeks before the main flow of honey. The strongest colonies receive two upper stories. This abundance of room (I suppose already built combs are given) prevents swarming altogether, or practically so, so that no watching for swarms is needed.

A first extracting is done about July 1. The honey then is all from clover, and Mr. Townsend wants as much as possible of pure clover honey, as the price is higher. But for that the extracting might be postponed. In August the main extracting is done, the honey then being a mixture of clover and basswood.

The essential is to have always plenty of empty combs on every colony. The apiarist should have enough combs and upper stories so as not to be obliged to extract in a hurry during the flow. Mr. Townsend puts about 100 colonies in each yard, the yards being quite far apart. He says that in some localities the honey may be missing, while 25 or 30 miles away there may be a crop. With out-apiaries far apart, one or the other will give a crop almost every year, and insures a regular income. He does not make any increase, as he thinks it is cheaper to buy than to rear bees. If any moving is to be done, it is done preferably in May. As his apiaries are on rented grounds, he puts on every one a honey-house constructed so that it can be taken apart, moved "in the flat," and reconstructed easily. As there is no watching for swarms, he prefers to have the bees sufficiently far from the houses or highways so as not to have any trouble. Weak colonies are left to themselves to build up—never united.

MR. E. F. ATWATER, OF IDAHO.

Mr. Atwater's locality has only poor and rather uncertain flows. For that reason he produces only extracted honey. The bees are wintered either on the summer stands where a windbreak is available, or in light, open sheds, facing south, with two tiers of hives in each shed. The sheds keep the hives dry, and protect them from the high winds prevalent in that State. No packing is needed, as the winters are mild enough to dispense with it.

All colonies must have an abundance of stores and bees in the fall, for the frequent flights, with large consumption of stores, will usually result in the loss of all weak colonies during the winter.

He prefers a large hive, and thinks that even the Draper barn is hardly large enough. He doesn't want any self-spacing frames in the upper stories, as there they should be placed further apart than in the brood-chamber, to save time in uncapping and extracting. He prefers plain frames, hanging on casing nails. About May 10 shallow cases are added to the colonies that may need them. Some equalizing is done.

Between June 1 and June 10 enough supers are put on to hold the first flow of alfalfa. If any colony is crowded below, one or two combs of brood are raised in the supers and replaced with empty combs. Plain zinc excluders are placed on every colony.

The first flow from alfalfa is extracted completely in July. The extracting outfit is hauled from yard to yard in a special wagon. Escapes are not used. The alfalfa honey is so thick that it must be extracted while warm from the hive. The second flow from alfalfa is extracted in August. The supers are then stacked in the yard and the bees allowed to clean them. Owing to the abundance of room but very few colonies swarm during the first flow, and these are among those superseding their queens. No swarming takes place during the second flow, not even in crowded colonies or those superseding their queens. Mr. Atwater produces some comb honey also.

MR. R. C. AIKIN, OF COLORADO.

Mr. Aikin prefers wintering bees out-of-doors packed in chaff. The colonies should be strong and have stores enough to last until May 1, no matter how much brood might be reared before that date. This packing is left until quite late in the spring in order to protect the early brood against the changes of weather. A visit is made about April 1, to ascertain the condition of the bees, to feed those that might be short of stores, and to unite the queenless ones with some others. His locality fails to produce pollen early, and there is but little nectar to be gathered until the main flows. So flour is given early if there is need. On account of brood-rearing each colony consumes from 40 to 60 pounds of honey from the fall to the main flow. And it is important that brood-rearing should be carried to the full extent, this being encouraged as much as possible. The queens are all clipped.

During May some colonies will get so strong that they might swarm. To all such an additional story is given under the brood-chamber. About 5 days before the flow opens a super with sections full of foundation and one or two baits is given to each colony, so they get used to it before the flow comes. When it comes, the additional stories are removed, and more supers are put on so that each colony has from three to five (his supers holding 28 sections). The queens are all removed. The queen-cells are cut out at once, and again 8 days later. A few colonies are set apart for building cells. After the other colonies have been 4 or 5 days without unsealed brood, these cells are given them to requeen. The young queens begin to lay during the latter part of the flow, and thus cause the honey accumulated in the brood nest to go "upstairs." When needed, supers are added below those partly worked, except near the end of the flow, when they are put above. The flow in this locality lasts from 40 to 60 days.

This process to prevent swarming and keep the bees together is the same as used by Messrs. Elwood & Hetherington, except in one respect: When they remove the queens they take one or two combs with each and form as many nuclei. Then 16 days after removal each queen is returned to her former home. If a queen is too old or otherwise deficient, the colony is allowed to requeen from one of its own cells.

A FEW COMMENTS.

When I began this paper I intended to give a description of at least half a dozen leading apiarists instead of three. I soon discovered that it would lengthen the contribution too much and contain too many repetitions. The following few points should be mentioned:

1. A honey-house should be put up at every apiary right in the midst of the bees, and built so that it can be easily removed, for an apiary placed on somebody else's land may have to be removed at any time.

2. Some have an extracting outfit complete at every apiary. It costs more, but saves the hauling. It has the advantage that should an unusual flow happen, the extracting might be done simultaneously at every point needed.

3. The majority insist on having enough combs to pile up on the hives until the honey is ripe, or the apiarist ready. Two or three say that in dry climates (California or Colorado) the honey will ripen just as well in the tanks as in the hives, and they prefer to extract often.

4. All but two want the different yards 2 or 3 miles apart, and as accessible as possible to the home apiary. The other

two want them at quite a distance in order to have the chance of catching a crop at some one or other place.

5. The number of colonies at each yard, without overstocking, is estimated at about 100 in the East, to 200 or 300 in California. One exception is Mr. Alexander, of New York State, who claims that almost any locality could support 500 colonies as well as 50 or even less.

6. The summary of all is what the Dadants told us long ago: Plenty of empty combs both for brood and honey. With that condition the number of swarms will be insignificant.

7. Very few extensive bee-keepers work for comb honey. The swarming can not be entirely avoided, and recourse must be had either to removing queens or "shook" swarming, as it is now called. In a small apiary it is best to treat the colonies that do swarm, and not bother the others; but with hundreds or thousands of colonies such discrimination is impossible.

The "shook" swarming will be considered in another article. Knox Co., Tenn.

⁂

Bee-Keeping as a Specialty

BY GRANT STANLEY

THERE has never been a time in the history of this country in which the service of the specialist was in such great demand as it is at the present time. We see it on every hand; the cry goes out all over the land for specialists; it goes out from all manufacturing establishments; it goes out from railroad companies, for men specially fitted for various lines of work; it goes out from every branch of the Department of Agriculture, at Washington; it even goes out from patients seeking treatment for various diseases. The cry to-day is for the specialist. We fairly seem to be passing through a reconstruction period. The reason for all this is not far to seek; surrounding conditions have become remarkably changed, and along with it various questions of a complicated nature, as well as of extreme importance, have presented themselves; questions of such a nature that only the specialist, or one who has been specially trained, can bring the result of his efforts into practical use—men of ordinary intelligence and ability will not do.

That bee-keeping has received a wonderful impetus within the last year or two there can be little doubt. This too long neglected pursuit is at this time receiving special attention. The Department of Agriculture, at Washington, has been awakened to its possibilities; the various State experiment stations are offering short courses in bee-culture, and some have even arranged correspondence courses for those unable to attend the school. There is certainly plenty of room for specialists in the bee-keeping ranks, and, as in any business, his efforts, properly directed, will result in great benefit to himself as well as to others; in fact, no well-directed effort is spent in vain. The bee-keeper who will specialize will soon find that his word has become authority, and, furthermore, his service will quite likely be in demand.

The bee-keeper who will specialize will have studied the various bee-diseases, and will be in position to eradicate any disease the minute it becomes manifest in his apiary; yes, he will quite likely go a step further, and apply such preventive measures that his bees will not become diseased: he will have mastered the question of disposing of his honey crop at the highest possible price obtainable; in fact, he will so direct his efforts that his product will be in demand; he will be able to reduce winter losses to a minimum, as a result of his thoroughly studying the essential features of successful wintering; the blooming of all nectar-producing plants will receive like consideration; in fact, the whole subject will be held up and studied on every side. It is the men who have become thoroughly acquainted with the elements underlying success at every point, to whom we must look to carry this work forward.

There are too many people who look on bee-culture as a business of little importance; in fact, enough would laugh at the idea of making bee-keeping a specialty. Others have not sufficient confidence in themselves to "keep all eggs in one basket," but is it not true that the men making a specialty of their business are the most successful? Is it not true that with a combination of pursuits a man must direct his thought and energy in several places at the same time, not being able to bring the best out of any of them, while in the making a specialty of one pursuit his whole thought and effort is centered to one point? And is it not true that only in this manner will the highest success be achieved?

Let us remember that what is worth doing at all is worth doing well; it is worthy our best efforts, and I assure you that if proper remedies are applied bee-culture will be brought to a very high degree in the near future.

Lycoming Co., Pa.

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A Tree Colony—Two Queens in One Hive—Bees and Dark vs. Light Colors

BY W. W. M'NEAL

I WISH to relate a little incident which happened in my apiary the past summer, that may be of interest to some.

On or about August 1, one of the Italian colonies cast a swarm. The queen that went with the swarm was a virgin, and they settled on a limb of a cherry-tree about 12 feet from the ground. The limb was not over 3 inches thick where the swarm was clustered, but a smaller one branched off from there, affording, seemingly, a satisfactory lodging place. From that location the bees could fly out and in among the branches with few obstructions; but the sun could shine full on the cluster during a portion of the afternoon. The floral conditions were very bad at the time, and I did not regard the swarm as being of sufficient value to pay for the trouble of hiving it, so I left it to its own sweet will, and discovered, several days later, it had decided to stay. I left it there till Sept. 1, then I hived it.

Now the bees built 5 small combs, the center ones being about twice as large as a man's hand. Brood was being reared successfully, the queen having mated all right. Considering the state of the weather, there being frequent rains while the swarm was keeping house outdoors, it makes the case a remarkably singular one. I don't think I ever witnessed a similar case in my 20 years' experience with bees.

At another time the past summer, when I was looking for the queen in a certain colony, I found what was presumably mother and daughter reigning jointly, seemingly, in perfect accord. Both queens appeared to be in good condition, and there was more than the average amount of brood in the hive. I have met with this experience several times before; but it shows how far bees will at times depart from their customary habits.

Let me relate just this one more—an experience with bees and chickens. Having observed that bees were influenced to some extent by certain colors, I thought to test the matter in this way:

I would fence in the apiary with poultry-netting, and then turn in several broods of little chickens. Well, I did so, and found that the little white chickens could run about without being molested, rarely, if ever, by the bees. Brown leghorns were not taken much notice of, but coal-black chicks were often stung to death.

If any of the readers of the American Bee Journal have witnessed anything that leads them to believe that bees are angered by the sight of dark-colored objects, I would be pleased to hear from them through its columns.

I have noticed boys in knee-pants and black stockings were more often stung on the legs when walking through the apiary than were bare-footed boys, or when shoes were worn without stockings to protect the legs. Scioto Co, Ohio.

Convention Proceedings

Report of the Chicago-Northwestern Bee-Keepers' Convention, held at Chicago, Ill., Nov. 30 and Dec. 1, 1904

(Continued from page 714.)

DETECTING FOUL BROOD.

Mr. France—There is one thing of vital importance to Illinois, that the State Association and the Chicago-Northwestern, now made a part of it, hand in hand together work for the needed legislation this winter, and not wrangle so much over other things. I am on my way to Washington to help Prof. Benton get out a bulletin, of which there will be published 50,000 copies for free distribution to the bee-keepers of the United States, on the diseases of bees. I find that educational literature on this subject will do as much good as inspecting. As soon as we can get the people educated I question if we will need any inspectors. [Applause.] As I said yesterday, unfortunately in our State I find a very small proportion of the bee-keepers who read bee-literature, and it is going to take some time to get them educated. Until that time we will have need of those other devices. To those of us here who have not seen foul brood, this sample I am taking with me to Washington—(by the way, it has odor enough)—is a sample procured out of a hive in the city of St. Louis while I was down there at our National Convention. That disease was contracted from your State, across the river, by bees robbing from the city of St. Louis, so that your State transmitted it over there. It is a very serious case of disease.

Mr. Wheeler—How can you prove that?

Mr. France—We prove it in this way: The strongest colonies of bees that this man had in St. Louis were, in the fore part of the season, very busy bringing in honey and apparently robbing from somewhere. He took chop dust and put upon those bees so that he might see how long it would take for them to go and come back again. He got the time, and he discovered them all going directly east across the river. He went across the river and found a bee-yard infected with foul brood, and these bees with the dust on, going in and out.

Mr. Wheeler—Did he have other colonies?

Mr. France—Yes, there are three others that have stolen away from this naughty colony which was the strongest, and to-day is a dead colony in the hive. Now the disease in appearance varies according to the localities, but I find some few things that do not vary a great deal: The sunken capping; the ragged, perforated holes in the capping. I believe in all the States that is common. The bee in the larval age, at about six to eight days from the egg, will first to the naked eye show the appearance of the disease; earlier than that you would need a glass. I am taking this from the point of those who want to use just the naked eye, as you can't, without a glass, see it before that. The bee will, in the larval age, instead of crawling around as it should, stand upon the point ends of that larva with its back up. It is diseased, in agony, and in that condition it does not *lie* down naturally. There is a little yellow cast on either side of the back. It finally straightens out the same as the natural larva, and in standing up it lacks the vitality to retain itself in that shape and falls back again to the lower side-wall of the cell. That is the time that the larva will make itself adhere to the side-wall and will never let go.

Now, there is a marked difference between black brood, pickled brood, and foul brood. Foul brood, when it once strikes the lower side-wall, stays there as if fastened with glue. The bees can not remove it except in one way. If those combs have been thoroughly fumigated with formaldehyde it has a chemical action on those and they do remove it in some cases, but not in all. That bee in the last dying effort gets quite a dark color, and it throws out its tongue frequently with force sufficient so that the tongue strikes the upper side-wall and as such will hold as if put there by glue. That will have a tendency, as the body of the bee dries out, to draw the head up. This tongue has a tendency still to hold, and in the sample I have here there are many of those larvæ at that age with the tongue still holding thread-like to the upper side-wall. That is the only reason I can give why always in foul brood the head of the larval bee has a Chinese-shoe-fashion or turn-up; it is because of that.

Now, the body of the bee becomes flattened and dark-brown, nearly coffee-color, and just at that point in giving way, as it drops down, there is a dark, very nearly a black streak across the body of the bee, and apparently on either side little brown streaks that will remain in that condition for about two days. It will continue to dry on the point on the lower side-wall until it is no thicker than the side-wall of the comb, sometimes even thinner than that, but the head end of the bee having dried in that curled-up shape shows itself to the eye much quicker than the balance of it further back.

How to look at the comb is one of the most important features that the bee-keepers of our country have not learned. They take a comb and hold it looking straight down into the cells. I confess I can't see foul brood in that way. For the benefit of this bulletin we are getting out, I went to an artist the other day with this comb and told him I wanted to be photographed, but to take the picture from the rear. I wanted to show how to look down in the comb. As an illustration we will suppose this to be a comb of foul brood, and I want to look into it and there is the light—and by the way, never take candle light or electric light—you want good day light in order to see it satisfactorily. If I were to hold it upright, and stand with the light coming over my shoulder, I would still look down into the bottom of the cell and see no foul brood. But let me tip the top towards me so that my eye looking in there will strike the lower side-wall about one-third the length towards the base, then I will see those black-brown heads readily all through the comb. You need never question it. Black brood or pickled brood will never have the appearance that foul brood does. In every state where I have found it, there is a marked difference. This photo is simply showing where I am holding up the comb. I made a streak on the negative showing the angle of the rays of light. It should be coming over the shoulder, and then tip the top of the comb towards you.

Mr. Wheeler—Have you learned anything definite this last year about fumigating?

Mr. France—I took one apiary badly infected where there were several hundred combs, and from the fact that formaldehyde gas is one of the best disinfectants the medical world has to-day, there was a great possibility, and I had a box made by one of the best carpenters, which was perfectly air-tight, all jointed, and white lead put in the joints. I put in that box quite a number of combs, leaving about an inch and a half space between each two combs. I had Mr. Weber's lamp and followed his directions with one exception—I gave twice the amount, and doubled the time in which it was fumigated. I aired the combs, and two days later I put them back into clean hives, put the bees back on those combs, and went to Los Angeles to the National Convention; came home, went immediately up there, and by the time I got back they had the brood hatched. In about three-quarters of those hives I found foul brood beginning to appear. I went to further investigation on the case and I found this, that every frame I had fumigated had here and there a cell that was capped over at the time. Those that were not capped over the bees had cleaned out, and I could not see any foul brood, but where they had not taken that capping off, seemingly the chemical properties of the acid had not destroyed the germs, and the brood in those cells was diseased. So that if I were to fumigate combs I should first uncap everything sealed and put it in an extractor, and I would throw that brood till I was satisfied I had thrown everything out of it possible, and then fumigate it. There is a possibility, but bear in mind we are running a great risk and I would not recommend it. I have carefully weighed the combs, carefully weighed the wax rendered from a set of combs, and considered the price of foundation, and in Wisconsin we can change a hive infected with old and black combs to comb foundation at the cost of 12 cents per colony. Why do we put any stress upon the loss in that line? Those bees have as much new vigor and ambition to work on foundation, over the other one, as a boy has over a new suit of clothes.

Mr. Wheeler—We have heard a good deal about fumigating the hive with a spray; there is a man in California that has practised that. He sprays the bottom-board and allows the fumes to go up in the combs.

Mr. France—I have tried that somewhat, but there is a marked difference between California's dry atmosphere and here. I question, with the experience I have had within the last two years, if the hive is thoroughly clean that there is any danger. I put the bees right back into the same hive on comb foundation, and I have no trouble.

Mr. Wheeler—Do you shake them out twice?

Mr. France—Yes. I tried two apiaries by shaking once, and in the majority of cases it cured it, but here and there would be a case in an apiary where it did not, and it would not be safe. We do not lose a great deal if we do this at the beginning of the honey-flow. As an illustration, up in Central Wisconsin I reached an apiary of 15 or 20 colonies, all infected, quite late in the afternoon or evening of the first day of basswood bloom. The man was a very thorough man: his surroundings all showed it. I repeated to him what I would do with the apiary, were it mine. I said, "Do you understand it?" He said, "Yes." Now as a teacher I learned that the best way to know that the student understood what I told him was to let him tell it back to me again. I said, "You tell me, if you please, what you are going to do with those bees." He did, and I had to correct him only in two places, so I was satisfied he understood how to do it, and do it thoroughly. Thirty days later I returned to the apiary to see what the effect was. The same hives were there and I could find no indications of the disease. That was two years ago, and there is none there yet. So I am satisfied it is treated and cured. And on those hives was from 16 to 18, and on one hive 24 pounds of section comb honey within 30 days after they had been treated. That colony had not suffered very much.

From another apiary that had gone down from a large to a small number, the apiary having been treated, those bees had been taking first and second premiums at our Wisconsin State fair. It doesn't hurt a boy to have a new suit of clothes. The cost is a very minor affair. The worst difficulty with me, for the first few years at least, was to adjust myself to the peculiar condition of each individual bee-keeper. There is the worst feature I find as an inspector. One man is glad you have come, and will do anything, even leave the harvest, if you please, to have that work attended to; the other man is the very opposite—he would sooner you would get away from there; he would promise anything to get rid of you; and the surroundings correspond. That is the man who needs an inspector, not the other man. In order to help out I have taken with me for the last two years a German wax-press, having a case made so that I could check it as baggage. Where I find a badly infected yard, with the class of bee-keeper whose surroundings are not favorable, I take off my coat and I stay there and clean up the premises myself, and take my wax-press and go on. If I leave it to him a neighbor who is making his living out of the business will suffer from the indifference of this friend.

(Continued next week.)

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Squab-Raising with Bee-Keeping

The question as to what may be run in connection with bee-keeping is one that is always in order. An article in White's Class Advertising with reference to the Plymouth Rock Squab Company, contains a paragraph which suggests the possibility of squab-raising as a side-line for the bee-keeping sisters. The paragraph is as follows:

"The records at the Boston office show that women are singularly successful in this industry, for it is easy work, and work to which they are especially adapted. Squab-raising is also a business which is run by a great many in conjunction with poultry."

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Finding Queens

Mr. D. M. Macdonald, copying in the British Bee Journal some instructions given in this department for finding queens, adds this comment:

"There is no royal road to finding a queen, and practice is what the novice needs. It becomes, in general, a simple process—although at times some queens, especially young ones, prove very elusive, and are really adepts at the art of hide and seek."

Good sense in that. Practice is everything. Just keep at work finding queens and it will soon cease to appear such a difficult thing.

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Sisters, Use Honey in Cooking

Any sister who has never tried honey in cooking is making a mistake. Cake is not in great favor at our house, but honey-cookies are a standard article. Besides being universally liked, they keep indefinitely—if not eaten before the termination of that uncertain period.

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A Canadian Sister's Success

The Canadian Bee Journal says that Miss Treverrow is, "so far as we know at present, the most extensive and successful lady apiarist in Ontario, her average this season amounting to fully 130 pounds to the colony of white honey. Miss Treverrow uses the 8-frame Langstroth hive exclusively. Referring to this she humorously stated that she was not one of the 'big fellows,' and does not intend to be."

That is decidedly interesting, but it is just a bit exasperating that Editor Craig leaves us in the dark on two very important points. Please, Mr. Craig, won't you kindly tell us how many colonies there were in that apiary that averaged 130 pounds, and also whether the honey was comb or extracted? You see it makes a big difference whether there were 5 or 50 colonies. In a good location, with no other bees near, the average from 5 colonies might be very much more than from 50, and 130 pounds of comb honey would be as good as about 195 of extracted.

In any case, Miss Treverrow did well, but just how well can be better understood if we can have the desired light on those two points.

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Honey for Chapped Lips

Either white vaseline or honey will make a pleasant application for chapped lips. Don't bite the lips. It is evidence of nervousness, and will keep your cupid's bow in very ragged, unlovely condition.—Chicago Record-Herald.

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Bee-Keeping for Women

In these days when so many women are engaging in all kinds of enterprises to make a living for themselves, and often to make a living for others, it does seem strange that so few women engage in bee-keeping. With modern methods, so that one need not be on hand all the time to watch for swarms, bee-keeping can fit in with almost anything else. Reading in the National Daily Review about what a set of enterprising women are doing with chickens and eggs down in a certain part of Tennessee, one wonders why those same women don't join in bees with the biddies. From Morristown, Tenn., a place of less than 3000 souls, there were shipped in a year 222 carloads of eggs and 702 carloads of poultry, representing the enormous value of nearly $3,000,000.

Now that isn't because there are some men of big capital who have started poultry establishments on a large scale. "To the *women* of East Tennessee, those living in the small towns and farming communities, is given the credit largely for this enormous volume of business." The chickens and eggs are largely taken to the small country stores all over East Tennessee, and are there gathered up by the hucksters who ship them in to Morristown or other near-by points.

That shows the power of littles when gathered into one great aggregate. Suppose one woman out of 20 throughout the land should keep 5 colonies of bees, and each colony should average 25 pounds of comb honey yearly, do you think that would add anything worth while to the wealth of this Nation? Let's see. One out of 20 women, at a very moderate estimate, would give 500,000, and with 5 colonies each, giving an annual yield of 25 pounds at 12 cents per pound, the whole would foot up the neat little sum of $7,500,000. Worth while, isn't it? And that would be just so much that is now going to waste.

Why under the sun don't more of the sisters go at it?

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

POLITENESS DEFINED

Stinging with sharp words, and then saving our "face" and reputation by offering the honey of a smile! "Afeared" the ladies do not have the monopoly of that naughtiness. How shall we attack this mightily respectable sin? Let's circulate (vest-pocket holder style) the best of all definitions of the word, politeness: Politeness is real kindness kindly expressed. Page 618.

THAT SUGAR-WATER SUMMER DRINK

Also afeared, Sister Wilson, that weakly sugared water exposed four days in summer will have considerable drunk in it. Fraud anyhow. The idea of its specially recommending itself to bee-folks because it consumes *two ounces* of honey to over four gallons of the stuff! Let us spew it out of our mouths. (In dumb show, without taking any in, best way to do that.) Page 618.

"SHRINKAGE" IN SCALE-WEIGHTS.

It be-wonders me what Geo. H. Kirkpatrick means by "shrinkage" in connection with his scale-hive weights on page 630. Hardly do to say that nectar just brought in decreases in weight so little as one-seventh or one-fourth in becoming ripe honey—and what else can it be? Also, I wonder if the figures in the column of gains result from weighing once a day or twice a day. There is a decided loss of weight by night—more when they have much young brood and less when they are rearing little—more when the gathering is large and less when the gathering is small—more when the nectar is thin and less when the nectar is less thin—and I *suppose* more when they get through roaring (fanning) long before morning, and less when they don't get the fanning job well done. For steadiness of yield with no cyphers in it this record is rather remarkable. Two maximums a few days apart, one jumping to 16½, and one of the growing kind growing up to 18½—big figures both.

HOW BEES BUILD HONEY-COMB.

After giving so lucid and interesting an account of comb-building as Mr. Doolittle has done—and getting such a trouncing for it as Arthur C. Miller gives him on page 631, I think he should reply—unless prepared to admit that the main statements of his account were worthless. Meantime I guess I won't mix in—any further than to say that I am not yet fully convinced that the bee does not help itself by certain rough-and-ready measurements—touching the work with some of its members. A live creature doesn't have to measure as a machine would have to do it.

And here's a big battle at boxing, worth
traveling to 'Frisco to see;
Ho, somebody! you go sponge Arthur, and
somebody sponge Mr. D.

DRONE-JUICE AS AN APIFUGE.

The Forestier experiments which Mr. Dadant gives on page 632, are appetizing, to say the least. Half inclined to think, though, that the results will dissolve into thin air when American bee-keepers try a hand. Easily tried and soon settled, I should say. As to protecting the hands with crushed drones, I don't realize any need of having my hands protected. I don't want to work with my bees when they are in any such infuriated frame of mind as to sting my fingers. The beginner would not feel so; but even he would get harm rather than good if he had the means of disregarding entirely the mood that bees badly handled in bad weather can be gotten into. At least one thing in these attractive experiments looks very suspicious. The understanding is that drones can enter other colonies about as safely as they enter their own. If this is so it's queer that the juice of alien drones themselves would be unnoticed. I don't believe we want an apifuge—not very sorely at any rate. But if wetting a queen in the juice of crushed drones is certain to give her a kind reception in the colony the drones came from, that will be a valuable addition to our resources.

DAILY WAX-SECRETION OF BEES.

No, sir. Your 26,000 bees are not going to secrete a pound of wax in one day. That would require each bee to secrete wax at the rate of its own weight in 6 days. Cut those figures down heavily. Nearly 20 years ago I was much interested in my own experiments on this line. Memory poor, and haven't time to hunt up the records just now, but the wax-secretion of a colony is nearer an ounce per day than a pound per day. Wax is produced in scales—scales small and thin—and only 6 of them on a bee. They would have to grow too much like Jack's bean-stalk to equal one-sixth of the bee's total weight in one day. Page 634.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to DR. C. C. MILLER, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Removing Supers for Winter

I have 15 colonies of black bees, with supers on. Will it be best to take the supers off, and leave them off during the winter, or leave them on the hives empty? TENNESSEE.

ANSWER.—It will be well to take off the supers, most certainly if sections are in them. No harm to leave the supers on if they are filled with some sort of packing.

Increase and Rearing Queens

1. When I get out and can attend to the bees, if I find they have eggs and larvæ in the brood-nest, would you advise me to put a division-board in the hive, placing the combs, larvæ and part of the bees on one side, shutting off the queen and bees on the other side? Understand, this is with the view of making increase between now and spring I noticed the bees were active upon the flowers before I was disabled, and hope there are still drones.

2. If the queenless bees should make queen-cells and place therein an egg, how long before the cell will be capped?

3. What is the time, generally speaking, from the capping until the queen cuts herself out of the cell?

4. How long is it, on an average, from the placing of an egg in a queen-cell till she comes out a full-fledged queen?

5. If there are no drones, can we not by feeding incite the queen to laying, and thereby produce drones?

6. If there are drones, and the queenless bees have formed queen-cells, would you form a nucleus of bees by taking 2 frames of bees and one of honey, giving each nucleus a capped queen cell?

7. How long after the cell is capped should it be before it is placed in a nucleus? CALIFORNIA.

ANSWERS.—1. A man who has been through the mill as you have, certainly deserves to succeed, but I doubt the wisdom of making any increase before next season. A colony gotten through the winter in good shape, and strong for the beginning of the season, will allow you to build up better than two weaklings that you might have if you divide now. Moreover, if you decide to try the plan you outline, you might do so without any great loss, and then unite for winter if you did not succeed.

2. In 8 or 9 days from the time the egg is laid the cell should be capped. But instead of an egg, queenless bees will start with a larva 2 days or so of age, and ought to be capped 4 to 6 days later.

3. About a week.

4. 15 or 16 days.

5. Possibly, but it's uphill business.

6. Yes, but hardly so late in the season.

7. The riper the cell the better, say within a day or two of hatching, or 5 or 6 days after it is sealed.

Wintering Bees in a Building—Taking Off Supers for Winter

1. I have recently put up a building to winter bees. Can I cut a hole in it and place the hive in front of it?

2. I would also like to know if I can paint a hive when the bees are in it. If so, when is the best time to do it?

3. When should I take off supers for winter? VERMONT.

ANSWERS.—1. Yes, you can have a small opening in the wall, and have a passage leading to it from the hive. But reports of wintering in this way have not generally been the most favorable.

2. Yes, the bees will not object, and the best time, so far as they are concerned, is when they are not very actively at work. Now is a good time.

3. Just as soon as the bees stop storing, and in the present case that probably means some time ago.

Management for Comb Honey

I have paid the strictest attention to the questions you have answered in the American Bee Journal, but kindly inform me if I have the right idea of the way you handle your colonies to produce abundantly of comb honey. I do not know of your method of getting colonies ready for the flow, but Mr. Doolittle's plan is as follows:

Six weeks before the flow, take a frame of honey, breaking the cappings, and place the same in the center of the colony. After 7 days he inserts another frame of honey in the center of the brood-nest, prepared as before.

I failed to say that when he has decided to commence operations he equalizes the stores so that he knows each colony has enough to carry it at least 2 weeks without any fear of starvation. Is your plan different from this? Will I be asking you too much for your plan?

Here is my point: If you have colonies good and strong, and ready for the flow, do you contract the brood-chamber down to say 5 or 6 frames, so the queen has only a few frames to lay in, and so the bees will rush the nectar into the supers?

Also, by having only 5 or 6 frames in the brood-chamber, you don't rear considerable bees to become consumers instead of gatherers after the flow is over. DELAWARE.

ANSWER.—All I do is to see that each colony has abundance of honey, and then let them build up at their own sweet will. So you see you're not asking a great deal when you're asking me to tell you that, and you will please feel free to ask any questions you like.

As to further management, I don't contract to anything less than one story of 8 frames. If the queen will occupy more than one story, I give the second, and then, when supers are put on, the colony is reduced to one story. That useless-consumer theory may be overworked, and I'm not afraid of having colonies too strong at any time.

I thank you for your kind words at the end of your letter.

May Be Robbing—Feeding for Winter

1. I believe my bees have paralysis. I have only 3 colonies; they have stored no honey. There are no other bees within a mile. It looks as if my bees were robbing each other. I have sprinkled sulphur over them once. How often ought I to sprinkle them? They are all fighting each other. A few seem to try to get into the top of the hive, but I think they are my own bees. I have contracted the entrances.

2. If I feed with a Boardman feeder, will the bees whose hives are filled up below take it up into the super? Two of the colonies have one super on, and one has more.

3. Would it be better to use a half-gallon Mason jar rather than a Mason quart jar?

4. The bees may have honey below. How much syrup ought I to feed them?

5. Would it be best to requeen them? They are black and cross. According to the American Bee Journal they have bee-paralysis. MISSOURI.

ANSWERS.—1. If it is a case of paralysis, keep up the sulphur every day or two till cured. But your saying the bees try to get in at the top makes it look like a case of robbing.

2. Whatever feeder you use, the bees will carry up into the super the feed after the brood-chamber is filled, and of course that wouldn't do.

3. One will answer as well as the other.

4. That depends upon how much they already have Feed till they have in the brood-chamber about 30 pounds in all.

5 It would be profitable to get a better strain of bees.

Location for Bee-Keeping—Miller Feeder

1. If you were free to select a location for bee keeping, where would you go?

2. What do you think of Northwest Colorado as a location for a bee-keeper? also Southwest Missouri? and Big Horn Basin in Wyoming?

3. Where can we get such information in a ready reference form?

4. Should the inside wall of the Miller feeder be a bee-space, or less, from the bottom? Would it not be better to be less than a bee-space, to keep the bees from the main part of the feeder? IOWA.

ANSWERS.—1. I don't know. It's a problem on which I'd put a lot of study if I had it to decide. It certainly wouldn't be likely to be such a location as I now have, with only one source on which to depend for a crop, and with the likelihood of that one thing being a failure some years—too many years. I'd try to find a place where there were several things to be relied on, unless some single plant could be relied on every year. Neither would the resources for honey be the only things to be considered. I'd want a place where I could have the delights of home and society—in short, where I could get the most fun of the purest and best kind out of this life, with the chance of doing something to make others want to live the best life here and hereafter.

2. I think they're good, except Big Horn Basin, of which I know nothing.

3. In the nature of the case there is no likelihood that such information in ready reference form will ever be available. If it were, all the best places would be likely to be taken up at once, and the information would then be of no value. It would be possible to make out some sort of a map as to honey locations, but what good to tell the best location if that location is already occupied? The problem of location will most likely continue in the future as in the past, to be one that each one must solve for himself.

4. I don't believe it makes very much difference as to the exact space.

Comb Foundation in Sections of This Year for Next Year's Use

Bees haven't done very well here this summer. There was no nectar in the white clover, nor in the red clover, either, so they will do well if they live. I would like to know if the comb foundation that has been in the supers this year will be all right to use next year.

MISSOURI.

ANSWER.—It will be all right if the bees have not spoiled it with bee-glue. There is much danger of that if the foundation has been left on till late in the season. If badly varnished with propolis, the bees don't like to tackle it another season, and it is not very nice if they should use it.

Why Did The Bees Do So Poorly?

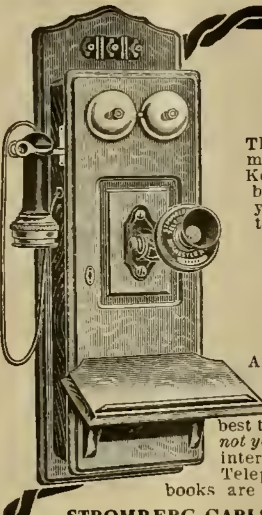
"Misery loves company," etc. After reading the first item on page 677, I feel a little relieved. I have kept bees for 15 years, and this is the first year in which I did not get a pound of surplus honey. Last spring I had 6 colonies; I now have 9, made by dividing 2 or 3, and the rest of the increase given to me by passers-by, who found a swarm clustered on a fence, and told me to get it. There were plenty of rain and flowers, but no honey. Half of my colonies need feeding now for winter. One colony not touched started to work in the sections. They had 2-pound sections nearly ready to cap, and I was thinking, "Now I shall have some surplus, sure." But lo! the next time I looked they had carried every bit of honey out of those sections, and now I have no honey for a single buckwheat cake. Surely it cannot be altogether poor queens. It's a mighty poor set of bees that would treat a man so shabbily as that. Not one ounce of surplus!

A neighbor 100 rods away has 2 and 3 supers' full on some hives, and another neighbor 1½ miles off fared no better than I. I have gotten a couple new queens from Iowa, thinking my stock was poor, but how can my stock be so much poorer than my neighbor's 100 rods away? Don't my stock mix with his? Won't they be more or less alike?

I quote from item on page 677: "If any one has the right answer to the question, he will confer a favor by forwarding it without delay to this office."

ILLINOIS.

ANSWER.—Yes, your bees will mix with those of your neighbor 100 rods away, and that mixing will of course make them more or less alike. But it takes time, and a good deal of time, to make them so much alike that one lot may not store a good deal more than the other, if there was a marked difference in their storing abilities in the first place. Mind you, however, that doesn't say that the difference in results is all owing to the difference in bees. There may have been a difference in management, or something else. Then it is possible that your neighbor's bees, 100 rods away, had access to pasturage that your bees did not get; although that is a hardly admissible supposition. Your getting no surplus might come under the head of the case mentioned on page 677—plenty of flowers in sight but nothing obtained by the bees, if bees 100 rods away had been in the same predicament; but with a distance only so small as that the flowers could hardly be entirely to blame.



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Reports and Experiences

Poorest Honey Season

This is the poorest season I have ever known—only one-third of a crop, owing to excessive rains. O. M. Blanton.
Washington Co., Miss., Oct. 8.

Bush Clover

I send a plant or blossom and would like to know its name. The bees are working on it. There is only one plant of it here, so I will save some of the seed. A. J. Diebold.
La Salle Co., Ill., Oct. 6.

[The plant in question is the bush clover, and a very good honey-plant, too. It takes possession of waste-places and scarcely ever becomes obnoxious. So you need not hesitate to let it spread.—C. L. Walton.]

Blessed with a Good Season

I see that reports from some places show a poor crop of honey. I have been blessed with as good a season as I ever had, and nothing from basswood. The crop was mostly from blue thistle, and as fine honey as I ever had. I had a hard time to extract it, as I always leave it on the hive until capped unless fall honey begins to come in, and my comb honey was the whitest I ever set eyes on. I sold the extracted at $5.00 for a 60-pound can, and can returned, as fast as I could take it off. Comb honey went at 14 cents, and the buyers resold at 20 cents, but that has been my price for years, regardless of crop, and I never have any on hand by Sept. 10.

It looks strange to me that bee-men have hard work to sell their honey crop. I would like to have what I could dispose of at the above figures. There is hardly a day by Sept. 1 but I have to turn down orders. The largest crop I ever had was 9800 pounds, about one-half extracted. That year it was all gone by Sept. 3. One buyer in Boston would take all I could produce every season. I let him have only one-half of my crop this year; and last year I could not let him have a pound, as the last two winters I lost most of my bees. I have only 75 colonies now, not all Italians. C. M. Lincoln.
Bennington Co., Vt., Oct. 9.

Fine Bee-Literature

I have gone through the first 5 copies of the American Bee Journal, and must say I like it fine! Those 5 copies are worth more than the subscription price. Too bad so many "would-be" bee-keepers do not value our bee-literature. J. G. Baumgaertner.
Clinton Co., Ill., Oct. 12.

Scarcely an Average Honey Crop

The honey crop in this locality could scarcely be called an average one, yet it was far better than last year. The weather continued very cool and wet until June, but in spite of unfavorable conditions brood-rearing was kept up remarkably well, which gave plenty of bees to gather from basswood, and basswood never bloomed nicer here than it did this year. The weather was also favorable for the bees during the time it bloomed. Asters are now beginning to bloom, and always gives a bountiful supply for winter stores. There is no feeding of syrup or other substitutes for honey here in the fall, as asters furnish all the stores necessary for winter.

I have 47 colonies of bees at present, all in Langstroth 8-frame hives, and all in fine condition for winter. About all colonies have young queens, which, as a rule, insures a populous colony of young bees, which will winter with very little protection from cold. From my experience too much importance can not be attached to giving young queens about swarming-time. Queens given then keep up laying until late in the fall, which produces bees of just the right age to live through the winter and rear brood in the spring.

Golden Italians are superior to any other strain of bees as honey-gatherers, and also for gentleness, in my estimation; they also winter well. James Wolfe.
Marshall Co., W. Va., Sept. 20.

Virgin Queens and Swarming Out

At last that all-important question (to me, at least) is being discussed, viz: Mating and swarming out of virgin queens. In this locality no worse advice could ever be given, than that of giving a frame of unsealed brood. The last virgin, when so helped, will bring out a swarm *every time* when there is honey to be found. Exceptions: Very early in the spring, say about March 1, or very late in the fall, say after the middle of October. Queens from these post-constructed cells are every bit as good as any.

Bees in Florida did not do much the past spring. It was rather cool, rainy and windy. One single rain-storm of 2 hours' duration in May ruined one of Florida's finest honey crops, viz.: honey from tupelo-gum.

My first surplus I got from corn, or, rather, corn-tassels. Yes, Dr. Miller, here in my location, on sandy, piney woodland, bees work on corn-tassels just as long as there is any *dew* on the grass in *the morning*, and no longer; a *few* bees would hover also over the corn-tassels a very short time before sunset, but on two or three days it showered, the sun coming out now and then boiling hot from behind the clouds. Bees worked on these days full time.

The fall crop—cotton and pea-vine honey—is only one-half of what it was with me last year.

About 2 years ago Mr. Sheppard, from this State, made a statement in Gleanings that in his location the *first* swarm came out with a *virgin* queen. At that time it was explained something like this: 1. Probably Mr. S. did not notice the first swarm with the clipped queen. (I, myself, thought so, too.) 2. Probably the weather delayed the issuing of the prime swarm. I also had 2 *prime* swarms come out this year, each accompanied by a virgin queen.

In *my* case it was simply a case of supersedure. As proof I will say that the bees constructed just one queen-cell. Further, the two old queens (in 8 and 10 frame hives) did rather poor duty right on. The weather was ideal for swarming. Well, the old queen did not come out, but left this chance for her virgin daughter.

Now I am of the opinion that the unsealed brood was the reason that the *only* virgin left the hive; because after the old "mama" died, there being no unsealed brood at the time the young virgin took her flight, she (the virgin) remained.

Will Mr. Sheppard, if he should see this, please answer through the American Bee Journal how long the old queen lived after he had the experience of a prime swarm with a virgin queen?

I am a bachelor, and have nobody to watch for swarms, consequently I run a home apiary like an out-yard. I generally open the brood-chamber every 8th or 9th day, and consequently know what I am writing about. D. J. Pawletta.
Columbia Co., Fla., Oct. 5.

CONVENTION NOTICES.

The National Bee-Keepers' Association holds its annual convention at the Revere House, corner of Clark and Michigan streets, in Chicago, during the Fat Stock Show, when exceedingly low rates may be secured on the railroads. The dates for the meeting are Dec. 5, 6 and 7. Rates at the hotel are 75 cents for a room alone, or 50 cents each, where two occupy the same room. Meals are extra, or they may be secured at near-by restaurants.
W. Z. Hutchinson, *Sec.*

Minnesota-Wisconsin.—The annual meeting of the Southeastern Minnesota and Western Wisconsin Bee-Keepers' Association will be held at the County Commissioners' Rooms in the Court House at Winona, Minn., on Oct. 24 and 25, 1905, at 10 a.m. of each day. All bee-keepers invited with their wives, and help to make the convention a success.
Joseph M. Reitz, Sec.
W. K. Bates, Pres.

Georgia.—The Southern Bee-Keepers' Association will hold a meeting in Atlanta, Ga., during the State Fair, Oct. 20, at 10 a.m., on the Fair Grounds, at the apiarian exhibit. All bee-keepers and those interested are invited to attend and take part. Judson Heard, Sec.

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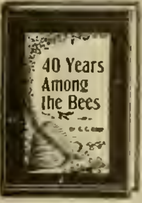

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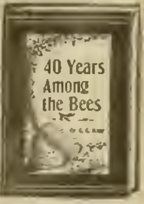

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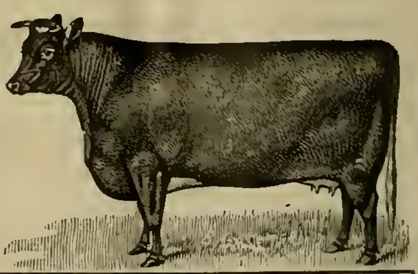

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Honey and Beeswax

CHICAGO, Oct. 5.—The demand for comb honey is about as usual for the season of year. Offerings from the surrounding States are fully equal to past season, but that from Colorado and the Middle Western States are not. No. 1 to fancy white comb honey sells at 13@14c, with an occasional sale at 15c; the off grades embracing crooked combs, etc., sell at 11@12c; amber grades difficult to place at 9@10c. Extracted, white, 6@7c, according to kind, body and flavor and package; ambers 5½@6½ cents. Beeswax selling upon arrival at 30c if clean; off grades about 2c per pound less.

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CINCINNATI, Oct. 6.—Reports from different parts of the country give evidence of an almost total failure in the comb honey crop, excepting the points in the North. We are selling this Northern comb honey at from 14@16 cents per pound, by the case. The demand for extracted honey is about equal to the receipts, which are good. We continue to sell amber in barrels at 5¼@6c; white clover at 6½@7½c. For beeswax we are paying 30c per pound, cash, delivered here.

(We wish to call the attention of the producer to the above honey quotations, who mistakably expects to receive these prices for his product. The above are our selling prices.)

THE FRED W. MUTH CO.

TOLEDO, Aug. 18—The market on comb honey at this writing is practically the same as last; however, honey is being offered quite freely, and this has a tendency to decline the price. On account of the heavy receipts of fruit there is no great demand for either comb or extracted at present. Fancy white clover in a retail way brings 15c; No. 1, 14c; little demand for amber. Extracted, white clover, in barrels, 6@6½c; in cans, 7@7½c; amber in barrels, 5@5¼c; in cans, 6@6½c. Beeswax, 28@30c. GRIGGS BROS.

CINCINNATI, O., Oct. 7.—The nice weather holds back the demand for comb honey. Crops seem to be exceedingly short and producers in the West keep the price high. We quote fancy water-white comb honey No. 1 white clover from 14@16c; No. 2 from 12½@14c. Extracted seems to be more plentiful. In barrels, light amber, 5¼@5½c; in cans, ½c more. White clover from 7@8c. Beeswax, 26c.

C. H. W. WEBER.

NEW YORK, Sept. 22.—New crop is beginning to arrive quite freely from New York State and Pennsylvania, and is in fair demand at 14c for fancy white, exceptionally fine quality may bring 16c; 13c for No. 1 white, and 11@12c for No. 2 white and amber; no buckwheat on the market as yet. Extracted, in good demand at last quotations. Beeswax, firm and scarce at 29@30c. HILDRETH & SEGELKEN

ALBANY, N. Y., Sept. 21.—Honey demand improving here as the season advances, and as next month is the best month we look for good prices. Buckwheat comb is scarce; that is, straight buckwheat. We quote fancy white, 15c; No. 1, 14c: mixed, 13c; buckwheat, No 1, 13c; mixed, 12@12½c. Extracted, white, 7@7½c; mixed, 6½@7c; buckwheat, 6½ cents. Beeswax, 28@32c. H. R. WRIGHT.

KANSAS CITY, Oct. 9.—The honey market here at present is very strong at $3 25 per case for No. 1 and fancy white comb in 24-section cases; amber and other grades selling for less according to quality. Extracted in good demand at 6½c. Beeswax, 28c.

C. C. CLEMONS & CO.

INDIANAPOLIS, Oct. 12.—There is a good demand for strictly fancy white comb honey, demand and supply running about even. Demand for lower grades of comb honey not good. Numerous shipments of honey arriving, but no one producer seems to have very great quantities to offer. I quote fancy white at 15@16c; No. 1 in poor demand at 12c, and amber dull at 10c. Best grade extracted brings 8@9c in 60-lb. cans; amber slow at 5c. Beeswax, 28@30c.

WALTER S. POUDER.

PHILADELPHIA, Oct. 10.—Honey has been arriving freely in the last 10 days, but as the quantity in the producer's hands is somewhat uncertain, the market is rather fluctuating, and sales have been made at various prices, which hardly fixes the market. We quote: Fancy comb, 14@15c; No. 1, 13c; amber, 11@12c. Extracted honey, white, 7c; amber, 6c. Beeswax sells freely at 28c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

SAN FRANCISCO, Oct. 4.—White comb, 1-lb, sections, 8@9cents; amber, 6 7c. Extracted, water-white, 5@—c; white, 4½@4¾c; light amber, 3¾@4 cents; amber, 3@3½c; dark amber, 2½@3c. Beeswax, good to choice, light, 25@27c.

Dealers complain that there is very little sale for honey in this market, and that so long as apiarists continue to hold at present figures there is little likelihood of any improvement. Growers are not at all alarmed over the outlook, as it is believed that they will find a ready market for their crop as soon as the fact of the shortage of the yield in many sections becomes established. As the matter now stands there seems to be a deadlock between growers and dealers, with little possibility of any improvement in the situation except through concessions on the part of the apiarists.

Please mention Bee Journal when writing advertisers.

JUST THINK OF IT!

LEWIS' NO. 1 FINE WHITE POLISHED SECTIONS

1,000	@$4.55	per thousand
2,000	@ 4.43	"
3,000	@ 4.32	"
4,000	@ 4.20	"
5,000	@ 4 09	"
10,000	@ 3.86	"
25,000	@ 3.64	"
50,000	@ 3.45	"

IF ORDER WITH CASH IS SENT IN THIS MONTH

as these prices are net after October discount is deducted.

Hives and Other Supplies Proportionately Cheap

Send for Catalog Containing Discounts and List of Agents

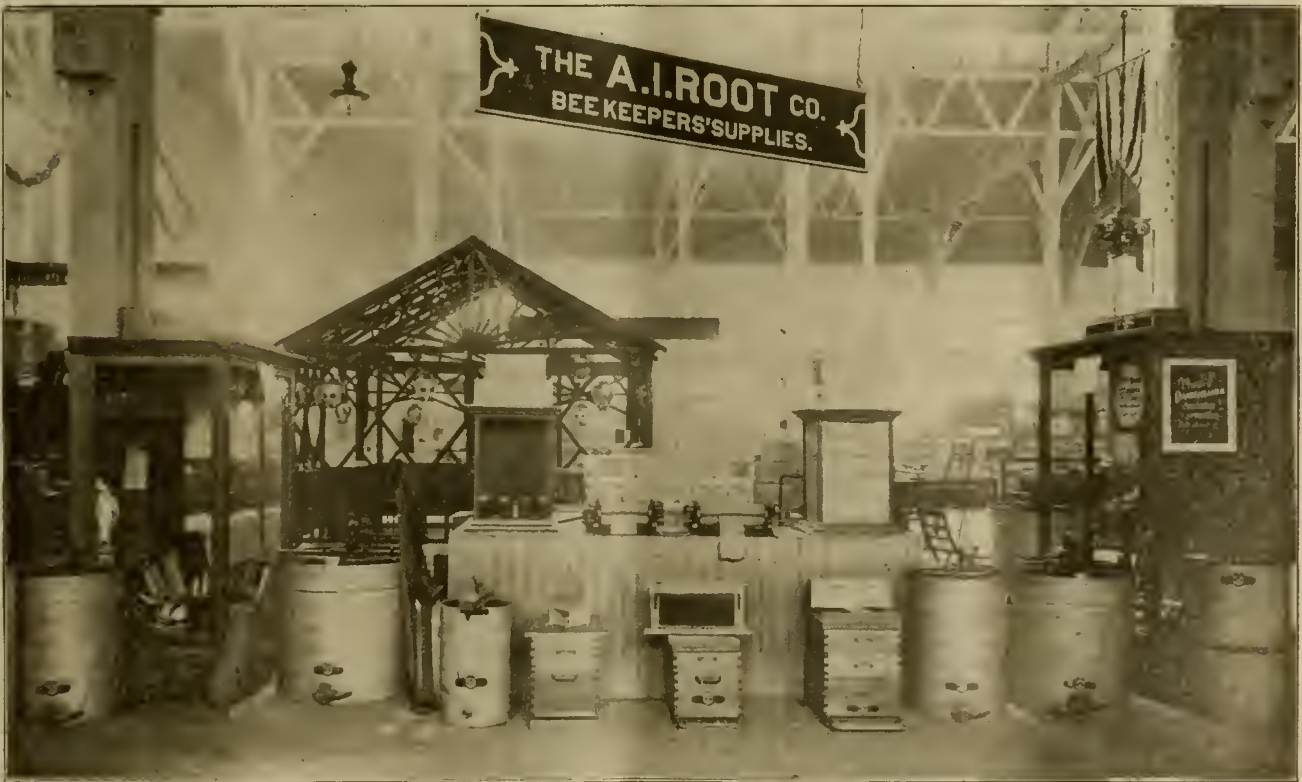
G. B. LEWIS CO., Watertown, Wis.

MASSACHUSETTS AGRICULTURAL COLLEGE

AMERICAN BEE JOURNAL

45th Year CHICAGO, ILL., OCTOBER 26, 1905 No. 43

J. G. Creighton and Apiary, of Hamilton Co., Ohio.
(See page 742)


THE A.I.ROOT CO.
BEE KEEPERS' SUPPLIES.

Apiarian Display of The A. I. Root Co., at the St. Louis International or Louisiana Purchase Exposition, in 1904.

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY

334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec05" on your label shows that it is paid to the end of December.

SUBSCRIPTION RECEIPTS.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows that the money has been received and credited.

ADVERTISING RATES will be given upon application.

National Bee-Keepers' Association

Objects of the Association

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00

General Manager and Treasurer—
N. E. FRANCE, Platteville, Wis.

☞ If more convenient, Dues may be sent to the publishers of the American Bee Journal.

The Honey-Producers' League

(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

MEMBERSHIP DUES

1. Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.
2. Any honey-dealer, bee-supply dealer, bee-supply manufacturer, bee-paper publisher, or any other firm or individual, may become a member on the annual payment of a fee of $10, increased by one-fifth of one (1) percent of his or its capital used in the allied interests of bee-keeping.

GEORGE W. YORK, Manager,
334 Dearborn St., CHICAGO, ILL.

Italian Queen-Bee Free as a Premium

To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us ONE NEW subscription with $1.00 for the Bee Journal a year. Now is the time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.

Learn Telegraphy and R. R. Accounting

$50 to $100 per month salary assured our graduates under bond. You don't pay us until you have a position. Largest system of telegraph schools in America. Endorsed by all railway officials. OPERATORS ALWAYS IN DEMAND. Ladies also admitted. Write for Catalog.

MORSE SCHOOL OF TELEGRAPHY,
Cincinnati, O. Buffalo, N.Y. Atlanta, Ga. LaCrosse, Wis. Texarkana, Tex. San Francisco, Calif.

29A17t Please mention the Bee Journal

Now is the Time to Order

Your Bee-Hives, Sections, Shipping-Cases, Berry Boxes, and Crates for the coming season. By sending us a list of goods wanted, we can save you money.

SHEBOYGAN FRUIT BOX CO.
35A18t SHEBOYGAN, WIS.

Mention Bee Journal when writing.

"If Goods are wanted Quick, send to Pouder"

BEE-SUPPLIES

Root's Goods at Root's Prices

Everything used by Bee-Keepers.
POUDER'S HONEY-JARS. Prompt Service.
Low Freight Rates. ∴ ∴ ∴ **Catalog Free.**

If you wish to purchase finest quality of **HONEY** for your local trade, write for my free monthly price-list of honey.

Why not secure your **BEE-SUPPLIES NOW FOR NEXT SEASON'S USE**, and avail yourself of the following very liberal discounts? Goods all **Root Quality.**

Percent
For cash orders before Oct. 1..........10
For cash orders before Nov. 1.......... 9
For cash orders before Dec. 1.......... 8
For cash orders before Jan. 1..7 percent
For cash orders before Feb. 1..6 percent
For cash orders before Mar. 1..4 percent
For cash orders before Apr. 1..2 percent

WALTER S. POUDER,
513-515 Massachusetts Ave., INDIANAPOLIS, IND.

Mention Bee Journal when writing.

DITTMER'S FOUNDATION IS THE BEST

Now is the time to prepare for next season.

If You Want to Save Money on Foundation, Working Wax for Cash, and on a full line of **SUPPLIES**, write for prices and discounts, and samples of our Superior Foundation.

E. Grainger & Co., Toronto, Ont., Agents for Canada.
The Bee and Honey Co., Beeville, Tex., Agents for Texas.

GUS. DITTMER, - Augusta, Wis.

Mention Bee Journal when writing.

Large Discounts on Bee-Supplies

To keep our factory busy after the season's rush is over. Send us a list of your needs in this line. The price we'll put on it will convince you that the time to buy is NOW.

Don't fail to file your application for our new catalog. It is going to be a valuable book for any bee-keeper. On account of the great expense only enough will be printed to supply those who apply in advance. Send your name to-day.

JOHN DOLL & SON,
Power Building, - - MINNEAPOLIS, MINN.

Mention Bee Journal when writing.

9 Percent Discount ON ORDERS FOR accompanied by cash sent us in **Lewis' Bee-Supplies**

OCTOBER. This applies to all goods excepting Honey-Packages for current use. BY RETURN FREIGHT OR EXPRESS. Send to

H. M. ARND, Mgr. **YORK HONEY AND BEE SUPPLY CO.** (Not Inc).
141 & 143 Ontario Street, CHICAGO, ILL.

(5 short blocks north of the C. & N. W. Ry. Passenger Station, using the Wells St. Cable Line from center of city to Ontario St.)

Long Distance Telephone—North 1559

Catalog and prices on Honey on application. If you want **Good Goods at Factory Prices and Prompt Shipment,** send your orders, or call on us.

BEESWAX WANTED—26c cash, or 28c when taking Bee-Supplies in exchange—delivered here.

Please Mention the American Bee Journal when writing Advertisers

"DADANT'S FOUNDATION"

—AND—

BEE-SUPPLIES

Revised Prices on Foundation

NAME OF GRADE	IN LOTS OF 1-lb.	5-lbs.	10-lbs.	25-lbs.	50 lbs.
Medium Brood	.55	.53	.51	.49	.48
Light Brood	.57	.55	.53	.51	.50
Thin Surplus	.62	.60	.58	.56	.55
Extra Thin Surplus	.65	.63	.61	.59	.58

DISCOUNTS for Early Cash Orders

During	September	10 percent
"	October	9 "
"	November	8 "
"	December	7 "
"	January	6 "
"	February	4 "
"	March	2 "

Beeswax Wanted at all Times.

DADANT & SONS, Hamilton, Ill.

WANTED

FANCY COMB HONEY IN NO-DRIP SHIPPING CASES, ALSO EXTRACTED HONEY. IF YOU HAVE ANY TO OFFER, QUOTE US YOUR ROCK BOTTOM CASH PRICE DELIVERED HERE, AND MAIL US A SMALL SAMPLE OF THE EXTRACTED HONEY. WE BUY EVERY TIME THE PRICE IS RIGHT, AND REMIT PROMPTLY.

THE FRED W. MUTH CO.

No. 51 WALNUT STREET, CINCINNATI, OHIO.

DEATH TO LICE.

LICE SAP LIFE

That's how they live and thrive. You can't have healthy, profitable fowls or stock and have lice too.

Lambert's Death to Lice

promptly kills all insect vermin and makes sitting hens comfortable. Sample 10c; 100 oz., $1.00 by express.

O. K. STOCK FOOD CO.,
D. J. Lambert, Vice-Pres.
406 Monon Bldg., Chicago, Ill.

Bee - Supplies!

We carry a large stock and greatest variety of everything needed in the Apiary, assuring best goods at lowest prices, and prompt shipments. We want every bee-keeper to have our **Free Illustrated Catalog**, and read description of Alternating Hives, Massie Hives, etc. **Write at once for Catalog**, either English or German language.

KRETCHMER MFG. CO., Council Bluffs, Iowa.

—AGENCIES—

Trester Supply Co., Lincoln, Neb.
Shugart & Ouren, Council Bluffs, Iowa.
Fulton & Ford, Garden City, Kansas.
I. H. Myers, Lamar, Colo.
Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex.

Bee-Keepers' Early Discounts

Now is the **Time** to send in your order for goods for use next season, and for all orders where cash accompanies we allow the following discounts:

Before October 1	deduct	10 percent
" November 1	"	9 "
" December 1	"	8 "
" January 1	"	7 "
" February 1	"	6 "
" March 1	"	4 "
" April 1	"	2 "

Freight-Rates from Toledo are the lowest. Can take Honey and Beeswax in exchange for Supplies if you desire. Send for free illustrated Catalog. It describes and illustrates everything for both the Poultry and Bee Keepers.

GRIGGS BROS,
521 Monroe Street,
TOLEDO, - OHIO.

Get New Subscribers Why not get a New Subscriber for the American Bee Journal, to send with your own renewal?

Mention Bee Journal when writing.

A GOOD INVESTMENT

$16\frac{2}{3}$ Percent Interest. Absolutely Safe. A Chance for Bee-Keepers Only.

Read again what Editor York says regarding it on page 661, Sept. 21, American Bee Journal.

ONLY 5 DAYS LEFT

To secure our 9 percent October Discount.

Discounts for Early Cash Orders

For cash orders before Nov. 1	9 percent
" " Dec. 1	8 "
" " Jan. 1	7 "
For cash orders before Feb. 1	6 percent
" " Mar. 1	4 "
" " Apr. 1	2 "

The above are the discounts which we offer for early cash orders.

You will notice that after January, the discount drops 2 percent a month; and if we find that advancing prices of materials do not warrant the larger discount, we reserve the right to reduce the amount.

Orders may be sent to any Branch House or Dealer

Well-known Dealers

The dealers, whose names follow, are well known to bee-keepers. They have been, for the most part, long established in the bee-supply trade, and have a knowledge of the business most valuable indeed to the bee-keeping fraternity. Their advice may be had on any question of Supplies, etc., for the asking.

The Large Stocks

Nowhere else is it possible to find such well-assorted stocks of goods for bee-keepers as are carried by dealers in Root's Goods. No matter whether you require a little 5-cent article or a carload of goods, these dealers can serve you promptly. Stocks are frequently carried amounting to $5000 and upward.

Shipping Points

You will observe that these dealers have excellent shipping facilities—guaranteeing you quick delivery and low freight rates.

Prices, Discounts

The prices, terms, discounts, etc., are identical with the home office at Medina (with rare exceptions). Full particulars may be had before ordering, if desired, by writing the dealer nearest you. You can, however, use our Medina catalog and terms, and, if any variation, your dealer will advise yeu, if requested, before shipping.

Other Dealers

Besides the following list, there are many others who handle some of Root's Goods. The following is by no means complete for hundreds of dealers come to us for many of the goods of which we are the exclusive manufacturers. *Insist on getting Root's Goods.*

Local Dealers

In addition to the following list who carry large stocks, and furnish at both *wholesale and retail*, we have in every State a large number of local dealers who handle our goods exclusively. As there are over 500 of these dealers, space will not permit giving their names at this time; but infoamation will be given by us, on request, to any bee-keeper regarding the dealer nearest him handling Root's Goods.

CANADA

E. Grainger & Co., Toronto, Ont.

COLORADO

Fruita Fruit and Produce Association, Fruita.
The L. A. Watkins Mdse. Co., Denver. Colo.

DISTRICT OF COLUMBIA

The A. I. Root Co., Washington, D.C.

GEORGIA

Howkins & Rush, 124 Liberty Street, Savannah, Ga.

INDIANA

Walter S. Pouder, Indianapolis, Ind.
Vickery Bros., Evansville, Ind.

IOWA

Joseph Nyscwander, Des Moines, Iowa

ILLINOIS

The A. I. Root Co., 144 E. Erie Street, Chicago, Ill.

KANSAS

Carl F. Buck, Augusta, Butler Co., Kans.

MISSISSIPPI

George A. Hummer, Brazelia, Miss.

MASSACHUSETTS

F. H. Farmer, 182 Friend St., Boston, Mass.
W. W. Cary & Son, Lyonsville, Mass.

MAINE

The A. I. Root Co., Mechanic Falls, Me.

MARYLAND

Rawlings Implement Co., Baltimore, Md.

MICHIGAN

M. H. Hunt & Son, Bell Branch, Mich.
George E. Hilton, Fremont, Mich.

MINNESOTA

The A. I. Root Co., 1024 Mississippi Street, St. Paul, Minn.

MISSOURI

John Nebel & Son, High Hill, Mo.
Springfield Seed Co., Springfield, Mo.
Blanke & Hauk, St. Louis, Mo.

NEW MEXICO

Edward Scoggin, Carlsbad.

NEW YORK

The A. I. Root Co., Syracuse, N. Y.
The A. I. Root Co., 44 Vesey St., New York City. N. Y.

OHIO

McAdams Seed Co.,Columbus Grove,O.
Griggs Bros., 521 Monroe St., Toledo,O.
C. H. W. Weber, 2146 Central Avenue, Cincinnati, O.

PENNSYLVANIA

Prothero & Arnold, Dubois, Pa.
The A. I. Root Co., 10 Vine Street, Philadelphia, Pa.

TEXAS

Texas Seed & Floral Co., Dallas, Tex.
Udo Toepperwein, San Antonio, Tex.

VIRGINIA

W. E. Tribbett, Spottswood, Va.

The following buy our goods in carload lots, but supplement them with local-made goods.

ALABAMA

J. M. Jenkins, Wetumpka, Ala.

OREGON

Portland Seed Co., Portland, Oreg.

TEXAS

D. M. Edwards, Uvalde, Texas.

CALIFORNIA

California National Honey Producers' Association, Los Angeles.
Madary Planing Mill, Fresno, Calif.

THE A. I. ROOT CO., Medina, Ohio.

Established in 1861

THE AMERICAN BEE JOURNAL

Oldest Bee-Paper in America

(Entered at the Post-Office at Chicago as Second-Class Mail-Matter)

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor | CHICAGO, ILL., OCTOBER 26, 1905 | Vol. XLV—No. 43

Editorial Notes and Comments

Honey Publicity

One of the best articles yet written on advertising honev appears on page 743. Mr Green has certainly given a whole lot of sound advice to honey-producers in a very short space. And if his suggestions are carried out a great deal more honey will be consumed by the public than is now being used.

What The Honey-Producers' League needs to do is to get busy on a trade-mark or brand for the honey of its members, and then advertise such trade-marked or branded honey in periodicals like the Ladies' Home Journal, The Delineator, Woman's Home Companion, etc.

Mr. Green gives the League a very strong endorsement, and also points out almost its only weak spot—having provided for no trade-mark or brand for the honey of its members. But this can be remedied, and doubtless will be.

Surely, what breakfast-food makers have done in the way of creating a great demand for their products, honey-producers can also do, if they will follow the same sensible, business-like methods. The Honey-Producers' League was organized for a good purpose, and its machinery needs only to be worked in order that resulting benefits may be enjoyed. But a larger membership is also needed. See page 738 for directions for joining.

◆

Treatment of Robbing Among Bees

The following methods are given in the British Bee Journal:

"Remove the hive attacked to some shed or outhouse, giving the bees ample ventilation. Allow the robbers free entrance into a new hive on the old stand, supplying them with very weak syrup. When they have had some of this, dilute it until it is little more than sweetened water. They soon give up in disgust, and, next day, the colony may be safely restored to its old stand.

"As a means to prevent robbing, use cheese-cloth. It is very cheap and durable. Envelop the hive with it, and in 10 or 15 minutes open the cloth at the top to allow the robbers within to escape, and then close it again, repeating the operation about every 10 minutes until all have escaped. The home bees are allowed to enter at sundown, though it is better to leave the cloth on for 24 hours, if robbing has been persistent. If however, the cloth was put on when robbing first began, it may be removed within an hour, as the colony will then have recovered from their disorganization."

If the last method proves successful, it might be made to work automatically, thus saving the trouble of attention every 10 minutes, by having the cheese-cloth finished out at the top with a Miller escape; that is, a robber-cloth with wire-cloth cone.

A plan of treatment that comes from Germany, is to cellar the victim and put in its place an empty hive of the same appearance. In this empty hive put a smoker going full blast, and before long the robbers will desist in disgust, and next day the colony can be returned.

◆

How You Can Help Others

It frequently happens that a question is asked in these columns which can be answered only by a bee-keeper in the locality referred to by the question. Whenever such question appears, any one who is able from actual experience to give the information desired, is requested to do so without further invitation.

It is our desire to make the American Bee Journal as valuable as possible to all of its subscribers, but in order to do so we often need the help of our readers. As you have been aided by the writings of others, why not give out a little yourself, when some question is asked, to which you really can give the right answer? Why not?

◆

Why the Failure of Honey Harvest?

In Irrigation—the official organ of the Colorado State Bee-Keepers' Association—R. C. Aikin discourses in a very interesting manner regarding the failure of the honey crop in Colorado. It is evident that he has been watching the matter with keen interest for a series of years, and he tells about failures or successes under this or that condition, and then just as the reader with tense interest is expecting an answer to the long-unanswered problem, Mr. Aikin says:

"Almost daily I am asked why the honey failure; I am forced to admit I do no not know. We all do know that we may have the bees and the bloom, yet no returns. Why?"

And there you are, with the problem thrown back upon your hands.

Although the question is one that will always be of interest, even if always left unanswered, there is comfort in the thought that even if we did know all about the cause of the failure to secrete nectar, it is something beyond human control, and the solution of the problem would only satisfy curiosity, leaving us as powerless as before to do anything about it.

◆

Photographs of Things Apiarian

We wish to invite those of our subscribers who have good photographs of apiaries, or something apiarian, to send them to us for the American Bee Journal. We may not be able to use them all, either because we do not think them available, or from defective photography.

If, after receiving the photographs, we decide that we can use them, we will request some descriptive matter to accompany them when used in these columns. If it is desired that we return any photographs, either used or unused, we will do so if requested.

We wish to thank those who have kindly sent us good photographs in the past. They have helped greatly the appearance of the American Bee Journal. Should any, whose pictures have been reproduced, desire to purchase the engravings, we will be pleased to sell them at a liberal discount.

◆

Educational Advertising on Honey

We find the following item in the September Butterick Herald, a magazine for advertisers:

HONEY IGNORANCE.

Honey has attached to it a great popular suspicion that ought to be overthrown by educational advertising. There never was in this world a pound of artificial *comb* honey.

Counterfeit strained honey is in the market by the ton, but to put the sweet into a wax comb is a trick that can be performed only by bees. Yet somehow, somewhere, a superstition got abroad that comb honey is easily simulated—and millions of cautious persons believe in this myth.

It is said that there is even a large standing reward for any one who will produce a pound of artificial honey in the comb and demonstrate that it is artificial.

A convention of bee-keepers not long ago discussed the advisability of an advertising appropriation to down this myth—for if it could definitely be laid low the demand for comb honey must necessarily grow by leaps and bounds.

There is no doubt about it, we think, that if the consuming public could be made to feel that all comb honey is absolutely the product of bees, they would use it to such extent that there wouldn't be a tenth part enough produced to supply the demand.

Also, if the dear public could be shown that certain brands of extracted honey were genuine bees' honey, we believe there would soon be such a general call for it that bee-keepers would find it very profitable to increase their apiaries, and, besides, there would be many more who would begin bee-keeping who are now favorably situated to do so.

What is needed first is some general advertising to educate the public on honey, and then special advertising of certain absolutely pure brands of honey.

Alfalfa and Sweet Clover

Some will no doubt be surprised to learn from R. C. Aikin, in Irrigation, that although alfalfa is the chief honey-plant in his part of the State, "the increase of sweet clover," says Mr. Aikin, "has brought it up until it is almost, if not quite, an equal. Alfalfa, when it does bloom, is in a body; when the bee finds a field of it the bloom is there in quantity, giving work without so much ranging; but with the sweet clover it is clumps here and there, long strings on ditch-banks, roadsides and such. It has been my belief for years that, as a rule, it is the plant and bloom that we find in large bodies that is most to be depended upon for surplus. There is no question in my mind but that all plants yield more or less nectar, the only thing necessary to make the plant a dependence is that it be in a body and in proportion to the demands upon it.

"It is not at all common," he says, "for bees to work early in this country; alfalfa seldom gets to business until 10 to 12 o'clock, when the sun has become hot. Our bees do not work early, but they do keep going until almost dark when there is nectar."

Non-Interference in Locations

In Australia, priority rights as to location have led to the adoption of the following rule by the Victorian Apiarists' Association:

> "In the establishment of apiaries by members of this Association, it shall be recognized as a general rule that a distance of at least 3 miles shall be kept from any other member's apiary, excepting in localities where the bee-keepers of any branch agree that 2 miles is sufficient, as regards that particular district."

Maeterlinck's "Life of the Bee."—We have a few copies of this book, price, postpaid, $1.40; or with the American Bee Journal one year—both for $2.00, as long as the books last. It is a cloth-bound book, and has 427 pages.

Miscellaneous News Items

Good for Minnesota!—We are informed that the Minnesota Bee-Keepers' Association have decided to postpone the time of their annual meeting in deference to the National. Both Associations had selected the same dates. We are glad to know that the Minnesota bee-keepers have taken the action mentioned. They will not regret it. No doubt they will have a number of representatives at the National convention now that they will not need to miss their own meeting in order to come to Chicago.

◆

A County Fair Mix-Up.—F. W. Hall, of Sioux Co., Iowa, is one of that State's wide-awake bee-keepers. But the following experience, taken from the Iowa Index, probably waked him up a little more than he anticipated:

> The Sioux County Fair, from reports, was certainly a success. F. W. Hall, with an exhibit of honey and apiarian fixtures in the Art Hall, had quite an interesting experience. The Orange City bees seemingly took it for granted that the display was spread for their especial benefit, and turned out in swarms. By the close of the second day it was necessary to pack up and get away with them in the dark. In doing so one of the horses—then tied to the rear end of the wagon—got his halter-strap caught, and upset the wagon on which the display was loaded A general mix-up was the result. But nothing serious occurred beyond a lot of broken honey, combs, and spilled extracted honey. To partly offset his loss, Mr. Hall carried off the first prize on comb honey, extracted honey, and for best display.

◆

"The Honey-Money Stories"—the illustrated booklet recently issued—is thus kindly referred to by the American Bee-Keeper:

> "The Honey-Money Stories" is the title of a 64-page booklet just issued by George W. York & Co., Chicago. It is unique in style, and is calculated to do missionary work among the masses, in the interest of the honey-business. It presents 33 illustrations, is beautifully printed on plated stock, and sells for 25 cents. It is a book that will not fail to interest every bee-keeper, nor any one else, for that matter. It is cheap at a "quarter," and those who send to the publishers for one at 334 Dearborn Street, Chicago, will get their money's worth.

While the retail price of "The Honey-Money Stories" is 25 cents, postpaid, we send 5 copies for $1.00; or one copy with a year's subscription to the American Bee Journal—both for $1.10. It should pay well to circulate "The Honey-Money Stories" among should-be users of honey.

◆

J. G. Creighton and Apiary.—Referring to the picture on the first page, Mr. Creighton sends the following:

> I was born in Hamilton Co., Ohio, 1844, and was brought up on the farm. I served through the Civil War, and am a holder of three honorable discharges.
>
> My bee-keeping commenced about the year 1871, and since that time I have had many ups and downs in the business. I winter my bees on the summer stands, and in the early part of my bee-keeping my loss was great, but after I abandoned the honey-board and used leaves for an absorbent to take up the moisture, my success was greater in wintering and my number increased to 49 colonies.
>
> Foul brood struck my apiary the forepart of the '90's. I had never seen a case of it, and by extracting and exchanging frames I scattered it all through the apiary. Within 2 years it put me out of the bee-business. For 3 or 4 years I kept no bees, but the desire had so fastened itself upon me that I started into bee-keeping again. Foul brood has struck me two or three times since I last started, but with my past experience I soon got clear of it again, and to-day I have over 60 colonies of Italians and Carniolans crossed, clear of disease, and never had them in a finer condition to go into winter quarters than now, although this year has been one of the poorest I ever experienced for honey, on account of a short white clover crop and wet weather.
>
> The picture I sent you is of my apiary and myself, with my left hand on an extracting frame of honey resting on an observatory hive. There are 3 cakes of beeswax on a case of 2-pound sections, and in front of me is a cake of beeswax surrounded with 7 bottles of honey on a case of 1-pound sections. This honey, wax, and bees took the 1st premium, that A. I. Root offered at the Harvest Home Fair, Aug. 26, 1905. J. G. CREIGHTON.
>
> Hamilton Co., Ohio, Sept. 28.

◆

The National Convention and Presidency.—We have received the following from Mr. R. F. Holtermann, of Ontario, Canada:

> EDITOR AMERICAN BEE JOURNAL—
>
> Would there be any advantage in offering a place or inducements to show any *new ideas* or inventions in bee-keepers' appliances at the coming National convention?
>
> As nominations for the National appear in order, I would just like to say that in my estimation Mr. C. P. Dadant has the best claim upon the position of president. I know he is of a retiring disposition, yet I believe he would value the position of president if it came as an expression from bee-keepers of their regard, and a recognition of his value to the bee-keeping fraternity. I do not believe that a man should become president simply because he is vice-president, but ordinarily the vice-president should have first claim on the presidency.
>
> There is perhaps no bee-keeper's name which has the solid respect and warm regard of the world's bee-keepers to a greater extent than C. P. Dadant; none which would to a greater extent shed luster abroad upon the National Association, and I judge as one who is a reader of British, German, French and Australian bee-papers.
>
> R. F. HOLTERMANN.

As to exhibits of any kind at the National convention here in Chicago, Dec. 5, 6 and 7, we would advise writing to the secretary, W. Z. Hutchinson, Flint, Mich.

As to Mr. C. P. Dadant being elected president of the National Association next month, we supposed that was practically settled. Of course it will require the formality of a ballot to place him in that position. He is perhaps the best known bee-keeper in the world, aside from Mr. Thos. Wm. Cowan, possibly. We have no doubt that the membership of the National will elect Mr. Dadant almost unanimously as president for the year 1906.

Comb Honey Guarantee Circulars.—These were gotten up by The Honey-Producers' League, to be put into shipping-cases before nailing them up for market. They are mailed for only 10 cents for 50—practically cost price. Every bee-keeper who has any honey to sell by the case should use these circulars. They will help to inspire confidence in the genuineness of comb honey. Send all orders to this office.

Contributed Special Articles

HONEY PUBLICITY

The Great Possible Value of The Honey-Producers' League—Suggestions as to How This May Be Accomplished—A Similar Case

BY STEPHEN N. GREEN

As a student of advertising, the problems that The Honey-Producers' League have undertaken are to me very interesting. The first reading of the constitution, from an advertisers' standpoint, suggested some improvements, particularly in regard to a trade-mark. Unless the Executive Board has power to provide for a trade-mark, the League is making a serious mistake the first year of its life; but I will speak of this matter later. Being only indirectly interested in the League, after first glancing over the prospectus the matter slipped my mind until reading an article on a similar project. The case of the honey-producer and the prune-grower was such a striking parallel that I became again interested, and have put some study on the subject. The article to which I refer is "Prune Publicity," by Homer C. Kratz, of California, in the August number of Ad Sense. I am quoting the article practically complete. The italics are mine to emphasize the points that I wish especially to enlarge upon.

The San Joaquin Valley, and Fresno County in particular, produces nearly all the raisins used in the United States, and it is also a prolific producer of that much-abused article, "prunes."

Indirectly, the attempt of the funny man to have his joke at the expense of the prune has cost the growers of California and Oregon much money.

The joke about being "full of prunes" has been no joke to the growers. It has hurt the sale of their product, and will eventually cause them to spend many more dollars to remove the impression that the prune is a joke.

We will agree that the prune is one of the most healthful and delightful fruits grown. There is hardly another more beneficial to the user. There is not another fruit with its keeping qualities and its cheapness to the consumer; yet with all these advantages the prune-grower does not make money. He never will until he begins using persistent, logical, and convincing advertising. He will have to spend many dollars that may apparently bring no return, yet all the time good is being done in educating the people up to the necessity of using prunes.

There are many examples of the class of publicity before the prune-growers. *The breakfast-food people have demonstrated clearly and conclusively that advertising will sell any thing.*

I venture the assertion that I can take alfalfa—one of the staple crops of Fresno County, in California—burn it, bake it, grind it up into a breakfast food, advertise it by telling of its health-building properties, and sell it by the thousands of tons. A nice little story about its recently discovered nutritious qualities—its nerve-building, brain-restoring possibilities—and its wholesomeness will send the food-crank to the grocer for "Alferina" breakfast food just as quickly as he goes for H. O. buckwheat, or grape nuts that are not made from grapes.

The first step in prune publicity is co-operation. No individual grower can succeed in making the public use more prunes. There must be an association of growers. There must be a fund for the dissemination of prune knowledge. There must be intelligent direction of the distribution of these funds. The story of the prunes must be told in an interesting way—the pictures should show the orchards in all their beauty—the advertising should create a desire to eat prunes, and, after being eaten, should make the eater feel that his system is being built up.

Glittering generalities won't sell prunes—the talk must be clear, concise, logical, brief, pithy. Let the medical man tell his story. First, get the health facts from him, build on that structure, and you will build as the patent medicine and the breakfast food man does; you will see the dollars come rolling in faster than they go out.

We will all agree that any food product, to be properly advertised, must be known by a distinctive name, brand, or trade-mark. Whether the prune is grown in Oregon or California, there must be a distinctive title that the buyer will recognize and want.

The advertising must appeal to women, as they do the buying; and if they get interested, many a man will get prunes who never tasted them before.

Prunes go upon the market in an unappetizing condition. They look hard, and, to the uninitiated, moldy. The man or woman who does not know how delicious they are will be sure to pass them by. Now, in addition to educating the public in the use of prunes, let us go a step further and give the public a package it will appreciate. Why not put a brand of prunes on the market all ready for use—already cooked—put up in glass jars, so that the clear juice and the rich syrup may be seen. *The tempting fruit will make itself wanted at sight, and will bring a high price.* If the housewife could get her prunes already cooked, only needed warming, how much more would she use?

We have before us the examples of the meat trusts in putting prepared food on the market. Ham, corned beef, chickens, turkeys, horse-meat (and Oregon puts up some of the latter), all go to the consumer ready to use, and the result is seen in the millions of dollars sold annually. I think canned dog might be put on the market under another name, and, with persistent advertising, pass for a health food.

Prune-growers should profit by the experience of those who have grown rich giving the public the things they will buy. *Establish your brands and your trade-marks;* ship none but good fruit; put up prunes in an appetizing way, and tell the people your story every day. Tell it to the women; the hand that rocks the cradle can fill the prune-grower's pocket if it chooses. Woo woman into using prunes, through the press; make her understand the value of prunes, and, as I have written before, many a man will be "full of prunes" before he knows it.

AN ATTEMPT OF THE FUNNY MAN TO HAVE HIS JOKE.

The bee-keeper may gather one grain of comfort that he alone has not been the only target for the arrows of the "funny" man. That little joke of Mr. Wiley's, that he did not label, is not the only one that has made the innocent suffer. Now, right here is where the League is doing a work that alone justifies its being. When one comb-honey lie appears it should get a retraction, and publish 10 good articles to make up for the one bad one. Not only use the pound of cure, but remember the ounce of prevention. That statement to go into shipping-cases should be well taken care of by every manufacturer or producer. This kind of "free" publicity costs but little, and is *very* effective. Use it to the limit. Get the newspapers everywhere to publish interesting, truthful stories about bees and honey, and you get the people to talking—just the best kind of advertising.

ADVERTISING WILL SELL ANYTHING.

Yes, if you can sell sawdust for breakfast food *why* can't you sell honey by the mere force of advertising? Honey presents magnificent opportunities for *good* advertising. Why, the great advertisers themselves use honey as a standard for comparison. Does not "Nabisco" remind you of honey? and, too, the National Biscuit people recommend its use with their Uneeda Biscuit. The Rubifoam people tell you their dentifrice is "as sweet as honey;" and how the Karo-syrup people did disgrace the fair name of honey to elevate their glucose mixture! for who will forget "better than honey for less money?" By the way, what has become of "Karo?" Let me say right here that even advertising can not fool all the people all the time; but I will take up the matter of merit as the foundation of advertising success later.

ADVERTISE HONEY—NOTHING EASIER.

What news the chemist can tell you! and the doctor! and don't the children cry for it? Is there anything more delightful to the taste than good honey? How many products come in such a variety of forms, and can be put to so many uses?

THE FIRST STEP IN PRUNE PUBLICITY IS CO-OPERATION.

Naturally the first step in honey publicity *must* be co-operation. The Honey-Producers' League is the *way;* but the bee-keepers must furnish the *means.* Join the League. Don't put it off. Don't wait for the other fellow to do it, and you expect to get the benefit. Make this a personal matter. If *you* don't get into line the League can not be the greatest possible power. If bee keepers don't co-operate, the honey-market will not pick itself up. If you don't co-operate you will always get low prices, your product will be slandered, your interests will be trampled on. *Get together—co-operate.*

MUST BE KNOWN BY A DISTINCTIVE NAME, BRAND, OR TRADE-MARK.

Right here is the only fault I have to find with the League. I read the constitution once, then again. What! no provision for a trade-mark? Have the founders forgotten a fundamental principle in advertising? Well, they will some day see their mistake, and it is easy to remedy, as the powers of the Executive Board are broad. Am I not right about this? For instance, can you name (?) an article successfully advertised that has not a distinctive name, brand, or trade-mark, or uses an apt catch-phrase? Aside from the absolute necessity of an article having a trade-mark, there is another side to the matter. When the League overlooked a trade-mark, it also overlooked a quality in human nature, and bee-keepers *are* human. Nearly every one expects *direct* returns from his money. Not many of us can afford to invest our hard-earned coin in philanthropic enterprises; we must get some in return. As the League now stands, it offers its members little direct returns. Now, a trade-mark on a member's product would raise the market value of it, provided, of course, the trade-mark be properly advertised. When a bee-keeper sees that he gets two dollars for the one he invests, the League will not have to work for subscribers. Oh, no! they will simply rush for admittance. Advertising a trade-mark will produce *direct* returns for the League's members, without a trade-mark (understand by this some distinct brand of some kind), your advertising is sure to reach an end, for such advertising feeds itself little, so has no means of growth. If the League does not give its members some benefits over and above what the outside gets, they will be very slow to subscribe, and extremely hard to get.

APPEAL TO THE WOMEN.

I do not know what plans the League has for advertising its product; but it surely can not fail to see the need of placing the bulk of its advertising before the women. It's the women that set the table, and it's the women that buy, so its the women that the League *must* reach. Woo the women! Tell her your story, Mr. Honeyman, and you will not complain of slow markets.

WANTED AT SIGHT, AND WILL BRING HIGH PRICES—QUALITY AND ATTRACTIVENESS THE TWIN SISTERS OF SUCCESS.

Honey *has* the quality. But don't let honey without quality get on the market if you can help it. Don't make the fatal error of letting the League's trade-mark cover a poor product. Make *sure* of this matter in *some* way. What is more disgusting than unripe extracted honey? It will spoil ten sales where one is made. Make it a very serious offense in the League to market such honey. Show the outsider where he is penny wise and pound foolish in doing this. Give good weight. If the section doesn't weigh a pound, do not allow this impression to be carried. When a section doesn't weigh the full pound, honestly say so, and charge less for it.

Honey *is* attractive, and attractiveness is a great selling force. Market the best grades only, and see to it that grading is done right. Don't, *don't* allow your trade-mark to market an inferior article. Strictly grade your comb honey; and bottle and neatly label the extracted; carefully sack the candied. Expect and ask a good price for your product, and you will get it, and have no trouble in doing so.

ESTABLISH YOUR BRANDS AND YOUR TRADE-MARKS.

To sum up, spend your money in judicious advertising in magazines, newspapers, etc. Get all the free advertising possible, you using your influence at home and abroad. Talk honey yourself, and be enthusiastic over it. Get a trade-mark, and make it stand for something. Then The Honey-Producers' League will be on the road to success, and be a powerful factor in the honey markets.

The problem is a complex one, and I have not by any means touched all the points. It will not be completed in a day. Mistakes will be made. But don't make the greatest mistake—not doing *any* thing. There is abundant material in beedom—brains and product—to make the League a great success. Don't wrangle among yourselves. Forget your *little* differences in the *great* cause. Make your motto, "Co-operate and advertise." You may then rightly expect a bright future for honey.—Gleanings in Bee Culture.

Wintering Bees on Solid Sealed Combs of Honey

BY J. L. BYER

While it is always with a degree of pleasure and profit that we peruse anything from the pen of so practical an apiarist as Mr. C. P. Dadant, nevertheless I feel to take issue with part of his article on page 679, entitled, "Work in the Apiary for October." I refer to the oft-quoted statement which Mr. Dadant sanctions; in effect, that "a colony will not winter well on combs that are entirely filled."

By way of preface, let me say that while such teaching may be orthodox, it is entirely erroneous as far as wintering bees outdoors in our cold Ontario winters is concerned. As is well known by most Ontario apiarists, so successful an outdoor winterer as Wm. McEvoy, is an enthusiastic exponent of the system of wintering on *entirely sealed combs of honey*; and, I may add, what experience I have had in the matter was prompted by Mr. McEvoy's teaching.

My Cashel apiary is in a splendid clover location, but with absolutely nothing after the clover quits yielding. With large 10-frame Quinby hives and Carniolan bees, for three or four falls I was confronted with the problem of fitting up colonies in big, *empty* brood-chambers for winter, after the supers were removed. During those years no combs of clover honey had been saved, and so to save the bees from starvation, of course I had to do the next best thing—feed sugar syrup. To feed 30 or 40 pounds direct into those big brood-chambers gave anything but best results, as it was too much scattered through the hive, and a large proportion was always left unsealed.

Now for the "better system" and its results: Half of the combs (the lightest ones) were removed from each colony needing feed, and a common division-board placed next to the last comb; a Miller feeder was placed on the hives, and sufficient stores fed so that each of the 5 combs was sealed to the bottom. Often large clusters of bees would be outside of the division-board until quite cold weather, but when real severe weather came on, somehow they always seemed to get "inside."

Every colony so treated *always* wintered in grand condition, which could not be said of colonies left with the full number of combs, even when they had sufficient honey. Outdoor winter losses in cold climates are generally brought about by one or two causes: Either the honey near the cluster is all consumed during a protracted cold snap, and the bees starve, or else a strong colony starts a brood-nest early in the winter during a warm spell, and the vitality of the bees is so worn out that they are unable to stand the latter part of the winter, and die of dysentery, or, perchance, later on fall a prey to that mysterious "spring dwindling"—the nom-de-plume of "bad wintering."

On solid sealed combs the bees care nought for cold snaps. They don't have to move to the honey. They are "there" all the time; as friend Mr. McEvoy says, they just have to "lean over and help themselves." No brood-nest is started early in the winter, from the simple fact that there is practically no empty comb at that time for the queen to deposit eggs in. The vitality of the bees is thus saved, and the bees are healthy and strong to rush things in the spring when the brood will be of use.

While I would not advise any one having hives heavy in stores to go to the trouble and expense of putting on entirely sealed stores, yet I would unhesitatingly urge all who may have light colonies to give the system a fair trial. While I haven't money to burn, yet I would have no fear in offering compensation for cases of poor wintering following such treatment, provided usual protection was given to the bees. It is needless to say that no matter how successful it may be, the system will never be popular, because of one factor—labor.

In conversation with Mr. J. B. Hall, I was told that from his experience there was no question but that bees wintered in splendid condition on solid sealed stores, but because of the extra work in spring and fall he did not follow the plan extensively.

Perhaps it is just as well that the system is not more in vogue, as it would mean winter losses practically *nil*, and a consequent overstocking all over the country. This may seem like extravagant language, but I am thoroughly convinced that in our climate, where the temperature often drops to 20 degrees below zero (I would have no fear if it was 30), and the bees are frequently confined for 5 months without a flight, that colonies in normal condition, *i. e.*, with good queens and plenty of bees, will winter 99 cases out of 100.

As to cellar-wintering, I have had no experience, but at least one successful cellar-winterer—Mr. H. G. Sibbald—has told me that "solid sealed stores are just as successful and necessary for cellar-wintering as for outdoors."

With all due respect, I would ask if Mr. Dadant, and others who advance the theory of poor wintering on "solid" combs of honey, have ever really tried the plan.

If they have, and report from experience, it might be well to compare notes and see why such vastly different results are obtained by different apiarists. If the teaching has nothing to substantiate it, by all means let it be relegated to the waste-basket (already pretty well filled), where many other exploded theories have been consigned in times past.

In looking over what I have hastily written, I was led to think that I might have given the impression that it was necessary to feed sugar syrup. For reasons not necessary to enumerate here, I would say that we feed practically no sugar now, but, when colonies are light, *solid seated* combs of honey are given to make up the deficiency.

York Co., Ont., Canada, Oct. 11.

Convention Proceedings

Report of the Chicago-Northwestern Bee-Keepers' Convention, held at Chicago, Ill., Nov. 30 and Dec. 1, 1904

(Continued from page 730.)

DETECTING FOUL BROOD.

Mr. Wilcox—Have you traced the source of foul brood to bee-trees or wild bees in the woods?

Mr. France—That was brought out very strongly the second year I was out. One man said, "There is no use treating my bees because the woods are full of bee-trees, and you will never get rid of it." I used to hunt bee-trees. So after I had treated all the bees in the vicinity, and before I got through, I found two bee-trees. One of them was where a swarm had gone from an infected hive; it was away over yonder on a bluff. This man said that that tree must be diseased. I said, "On what basis can you argue that that is diseased?" He said, "Why, the bees went from here over there; they carried the honey with them, and I am dead sure it is diseased." I said, "Wait a moment. What did we do to this hive?" "We took away the combs; we gave them foundation?" "Have they got any over there?" He said, "No." I said, "After they had drawn out the foundation we took that away and made them go again and they had nothing; they had to consume all the honey they took with them to produce the first combs, to start to store the honey they gathered from the field, and I will venture the assertion they are not diseased."

We went over and cut the tree down, felling it very carefully, and there was no disease. We cut some other trees and I found trees where the bees had died from lack of protection; and I also found this, that within a year's time after a colony of bees had died the squirrels and the bee-moth will eradicate everything in the interior of that tree; there is no danger left. If the bee-keepers will attend to their end of the work they need not worry over the bee-tree problem. There is just one way a bee-tree might be infected. If a colony has combs drawn and has wintered over, or towards the latter portion of the season they have somebody who is careless, thereby having foul brood, that bee-tree bees could go and rob from an infected bee-hive and transmit it to that tree; but we all know it is a matter of short duration; that colony of bees would not last long; squirrels and moths would soon eradicate what is in the tree. If we do our part we will get rid of foul brood.

Pres. York—What kind of a foul brood law do we need in this State?

Mr. France—Coming out of another State I hardly like to recommend, but my opinion is this: Keep the appropriation you have; put in effect your inspector with authority, and you will accomplish a great deal of good.

Pres. York—You mean as to a compulsory clause?

Mr. France—Yes. Now this comb I have here is an illustration. As I understand this apiary is in your State; your inspector wants to investigate that apiary and has been objected to. Look at the situation. We will take as an illustration a row of these seats, each one representing different apiaries. The inspector comes to this party and wants to look at the hives. "Yes, I am glad to have you come in." The next says, "My bees are all right." The inspector says, "I don't like to look at these, but while I am here I will look at them." The answer he receives is, "You get off the premises." He has got to go. You see the weak point in the law. What would we do with contagious diseases amongst ourselves if our law did not admit of our health warden coming in and saying "this is small-pox," or any other contagious disease, "and they must be quarantined." You say, "No, we have no small-pox; let everybody come in and out." It is just as necessary for your inspector to be clothed with that authority if you would get the desired effect.

Mr. Kimmey—You have considered the possibility and propriety of having a National foul brood law?

Mr. France—Yes, but we have first got to demonstrate through the States before we get that. It may come to that in time.

Mr. Pease—What proportion of the States have foul brood laws?

Mr. France—I think about nine.

Mr. Abbott—Let me suggest that you cannot have a national law.

Mr. Colburn—We have a pure-food law.

Mr. Abbott—That is interstate commerce.

Mr. Wheeler—What is your plan in regard to appointing an inspector? How is it proposed? I suppose the law will have to be plain.

Mr. France—I think that those who are interested in the line of work should select one whom they think competent. I don't believe it is a good plan to allow this to be a political appointment. Let that man be selected by the State or local association. They know better who they want than any other person, and let their recommendation be of the one who serves them best. They cut out that portion of our Wisconsin Law. I fought it to the bitter end. It was first, "Upon recommedation of the Bee-Keepers' Association the Government shall appoint." The political men saw fit to modify our law, and now it says, "The Governor may appoint."

Pres. York—If he does not care to appoint anybody, you have no inspector?

Mr. France—No, sir, and the State Association is not asked, although it is still recognized. They have asked the State Association. There is another thing they do in Wisconsin. The State Board of Agriculture asked the bee-keepers whom they want to be judges at the State fair. They consider that the State Bee-Keepers' Association ought to know who is competent for that; and the one they recommend has always been appointed. Now in regard to this sample of foul brood, I have here, I will confess this much: In this room, with the light you have to look into, I would guarantee it would be almost a failure to see the various stages of foul brood, from the fact that you would get shadows that you wouldn't get in day-light, but I have illustrated to you how you should look to see it.

Pres. York—I should think now that we ought to be able to know foul brood or almost smell foul brood or something, by this time, as we have been talking about it all forenoon. I was glad to have it discussed, but I was afraid some that were not particularly interested would get tired of it.

Mr. Meredith—My reason for coming here was based almost entirely upon what I could learn about foul brood, knowing that the disease is around Batavia, and I think in an apiary that was inspected by one of the inspectors. If I am going to keep bees I want to be in condition to know when my bees are free from disease, or take such measures to see that they are.

Mr. Moore—I want to speak of a thing that has not been mentioned here by anybody. In regard to fumigating to cure foul brood, I have taken the same stand as Mr. France and our best authorities, but I thought it was not well to recommend fumigating on the ground that we didn't know whether it was successful in all cases; and, second, it is dangerous to put a knife into the hand of a beginner. It is dangerous to put a remedy we are not sure of in the hands of the average, inexperienced bee-keeper. I had quite a long talk with Dr. Eaton, who, I thought, would be here to-day. He is the chemist of the Illinois Food Commission, and we talked about this very matter of formalin fumigation. I said to Dr. Eaton, "Here you have a cup of honey. Down in the bottom of that is a spore of foul brood covered with honey an inch or two deep. If you fumigate that thing for a month or two with formalin what will happen?" He says, "After a while the formalin will unite with the honey. It has an affinity for water, and honey is a solution of water and something else; and you will have a compound of formalin honey, and so on." I said, "What will be the effect on this spore in the bottom of the honey?" He said, "It will absolutely destroy it." I said, "What do you think if we take our combs of foul brood and shave off the coverings of the cells with a sharp knife so as to expose the honey, pollen and germs of foul brood, if you put it in a boiler of water and jounce it up and down, then put it in the extractor and whirl it like everything so as to throw out everything that is dissolved by the water, and then fumigate a long time, what will be the result?" His opinion was that because formalin combined with the water it would absolutely destroy everything in the comb that was infectious. Now there is a point for these people that have facilities like Mr. France and Mr. Smith, perhaps, to experiment upon. It seems to be a new way of experimenting with formalin gas.

Mr. Dadant—You can't get water to the bottom of the cells by dipping it in water.

Mr. Wheeler—I think that is proven every time you fumigate a hive. From that gas that is generated there is a steam, and there is nothing more penetrating than steam. The combs, after they come out of the fumigation, will be wet with steam. Surely the very bottom of the cells will be saturated by steam from the formaldehyde gas.

Mr. France—Anywhere over the States, since I have been in this National position, the members have taken it as a matter of fact that when they get into any trouble or grievance no matter what it is, "fire" it into the General Manager: and among other things they "fire" in samples of foul brood from all over the States. I analyze them as well as I possibly can, and give a report. But I want to make this one statement: Whenever you are sending samples of suspected material by mail, put it in something so that it will stand the racket in the mail. So many of the packages come all smashed up. I had one come the other day with a piece of newspaper around it and a two-cent stamp on it, and the whole thing was about as thick as a piece of cardboard when it reached me.

Dr. Miller—Put it in what?

Mr. France—The best of all is a tin box next a wooden box. And, by the wav. the United States mail people may get after you if you don't.

(Continued next week.)

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Bee-Keeping in Australia

I just came upon the following in our daily paper:

"In many parts of the Australian continent bee-farming has become a profitable and popular occupation. There are at present over 25,000 colonies in Australia, producing from 10,000,000 to 15,000,000 pounds of honey annually."

Can you or any of the reabers of our valuable American Bee Journal, give any more light on the subject of bee-keeping in Australia? If so, I should be very grateful to have some one write an article on the subject.

Elsie A. Cutter.

Kent Co., Mich., Oct. 7.

The writer has never been in Australia, but some reading of the two bee-papers published there (and incidentally a visit from the editor of one of them), warrants the statement that bee-keeping in Australia is in many respects the same as in this country—hives, management, etc., being more like those in use here than those in use in the mother country, England. Great yielda have been recorded, but perhaps no greater than in some parts of this country, and prices rule so low that the business is not so very profitable. A large part of the honey is secured from eucalyptus-trees, which Australians rate the finest in the world. Unfortunately, people outside of Australia do not all agree in this view, and repeated efforts to obtain a favorable reception for it on the London market have not been successful. It certainly haa a peculiar flavor, unlike any other honey, but that peculiarity does not seem to commend it greatly outside of Australia.

Judging from what is said in the Australian bee-papers, and from the one specimen seen here, the bee-keepers of that far-away land are a bright lot of people, concerning whom it is a pleasure to be informed.

* * *

Buying Bees in Fall or Spring—Shipping Bees

Dear Miss Wilson:—Will you kindly give me your advice on the following points:

Two sisters, friends of mine, have bought a little farm. They will not occupy it until spring. (It's in New Jersey). They want to keep bees. Is it best for them to purchase this fall or in the spring? Also, is it safe to ship bees, and is it not quite expensive—the express charges? New York.

Firstly, it is not advisable for beginners to buy in the fall. Better buy in the spring and avoid the risks of wintering. If one or two colonies should be bought as a starter in the fall, and if one or two out of those one or two should die in the winter, it would be a pretty large-sized wet-blanket on the whole business. If bought in the spring, the likelihood is that there would be a larger number by fall, and if one or two should fail to winter, the loss would not be so heavy. Besides, the experience with bees through the summer, although not directly bearing on wintering, gives one a knowledge that makes the chances for successful wintering greater. If the bees are bought in the fall, the chief experience of the winter will be that of worrying as to whether they will come through alive. Just as well to omit that part of the program and start in fresh in the spring.

Secondly, bees can be shipped with safety if properly prepared. But on most railroads they can be shipped by freight only in car lots, leaving the express as the only way to ship small numbers, and express charges on full colonies of bees are something fearful, especially if the distance be great.

That last question being answered as it is, another question is likely to arise, and there is no law against answering more than is asked. If high express charges bar out the shipping of full colonies, how shall the start be made? One way is to get a 3-frame nucleus instead of a full colony. Express charges will be very much less, and such a nucleus will rapidly build up into a full colony.

A still better plan is to buy a colony of best blood from some one close at hand. Very likely that can't be done. Well, then, buy from some one close at hand a colony that isn't of best blood. You see there isn't the same objection to "starting wrong" with bees that there is with any other kind of stock.

If you start with Rouen ducks, you can't change your flock to Pekins; you've just got to begin over again with Pekin ducks, and the same way with other stock. But it is different with bees. Get a colony of bees of any kind; buy for a dollar a queen of Italian stock, and in 6 weeks of the working season your whole colony will be Italian bees. The chances are that that will be the best way for you to start.

While waiting for spring to come, it will be a good thing to get a bee-book and study up in advance.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New nnd Unreliable Glasses,
By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

A Musical Face—Bee-Music.

People mostly try to "keep their face." Journals mostly try for a change of face. As a new variety of face, No. 37 opens with some bee-music for bee-sisters and apicultural going-to-be's. Comrade Secor is well up toward his best in this, the second verse being especially a gem. Nice music, did you ever think of it, is divided into two classes, the good class and the better class. The good class sounds nicely when properly played and sung at the instrument. The better class is quite able to get away from the instrument, and we hear people singing snatches of it almost unconsciously. This effort of Editor York's I have tried to locate in the higher class, but I rather think the other one is its real place. By the way, if the bees get in the linden tops *superlatively*, 5 pounds in a bunch, and Prof. Bigelow gets after them with his revival of the old "bee-music." it will be quite unavailing to sing "bye baby" in opposition to it.

Excessive Swarming and Nurse-Bees.

It has become tolerably plain that excessive swarming bears some sort of relation to excess of nurse-bees over and above the young brood which they desire to feed. The idea advanced by Adrian Getaz, page 645, may prove a very valuable one indeed. If we cau make the nurse-bees go to the fields to work, for want of anything else to do, they will not again become supernumeraries, stirring up discontent and swarming. I fear, however, that sometimes some bees (especially when the flow is poor) will sulk much more than 4 days, and resume queen-rearing the minute it is made possible for them. But if we can not have a remedy that works all the time, a remedy that works part of the time may be worth considerable. And that's a wise idea (not altogether a new one) that colonies that refrain from swarming of their own accord store better than those successfully prevented from swarming. A wee bit tantalizing this fact is.

Swarmino Out and Virgin Queens.

The solution given by Mr. Muth-Rasmussen also seems to be an excellent one. Bees do not swarm out with a virgin on her mating trip except when they have no young brood to fix their minds on. Page 645.

Young or Old Bees as Queen's Escort in the Mails.

It surprised me to hear C. P. Dadant give decided preference to old bees fresh from the fields as companions for a queen on a journey. I had seen quite young bees recommended, and supposed that all shippers preferred them. Willing to believe he is right. I wonder if the *why* of the matter is known. I'll guess that young bees feed the queen semi-digested food to some extent, and that old bees do not. Presumably while she is on a journey she is better off not to have anything stimulative to egg-production. Perhaps also digestive efforts in the queen's behalf exhausts the bees so that they die sooner than old ones would; and when they are gone the queen soon dies also. Page 647.

Putting Weak Colonies Over Strong Ones.

W. T. Cary seems to add a new wrinkle to the new plan of putting weak colonies over strong ones without entire uniting. Gives the upper colony a separate entrance so they do not have to go below unless they want to. Worked tolerably well in one case. The appearance was that a few old bees from below came up and got killed; lots of young ones came up and were adopted; and the upper bees generally refrained from going below. We seem to be getting a great variety of performances on the part of the bees. Page 647.

Prices of Bee-Supplies.

High prices of supplies to keep Tom, Dick and Harry out of apiculture, eh? Might not T. D. H. and Co. revert to box-hives and market chunk honey, instead of "clearing the coop?" But when J. E. Johnson advises amateur hive-makers not to cut their pieces "pretty near square," but exactly square, he is getting in good didactic work. Nice store-boxes of pine to be had almost gratis—I fear their day is declining, if it has not already passed. Try literature, Mr. J. Your phrase, "All raise at once, just like the curtain of a stage," shows budding talent in that direction. Page 648.

Wax-Worms, Wasps, Spiders and Combs.

According to page 651 (which agrees in a measure with my experience also), there was trouble with worms in section-honey years ago, but not enough now to call for any remedial measures. Why? Don't believe it's wholly, or even mainly, owing to Italian bees. I suspect some other and deeper reason. Why was the supposedly endless pest of flies much milder than usual this year? Bad enough yet—but one would like to know why the mitigation. Same thing even more pronounced appears with another race of insects—the wasps. I do not remember a year before when available roof-crannies were not greatly populated—mud-wasps and paper-wasps in great abundance, several species of each. This year they are actually scarce. Don't know as I am exactly rejoicing about this last. I think wasps on the whole do us more good than harm, devouring the wax-larvæ which come where they can get at them. Combs widely spaced in clean, empty hives often get through the hot weather all right. I would like to know whether we should apportion the greater credit of this to the wasps or to the spiders. It isn't nice to be thanking the wrong people even among our small neighbors. *Mice* will sometimes devour and clean out larvæ when they have gotten so fortified with webs that no insects could do much with them. If mice make a regular business of going over all well-spaced combs they have access to, possibly more credit belongs to them than to either spiders or wasps. Wish I knew more about it.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to Dr. C. C. Miller, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Good Locations for Bee-Keeping—Shipping a Carload of Bees

The summer is past, and the harvest is ended, and I have a large crop of blasted hopes, but I don't think they will bring me in much cash. It just rained the bees out in this part of the country. It was so cold and wet during clover bloom that the bees could not do much, and not a pound of white honey was harvested, but the bees built up strong, and we looked for a good crop of yellow honey, but just as the fall flowers began to bloom it commenced to rain, and kept at it every few days until about 2 weeks ago, and my crop is 8 pounds of finished honey and 30 or 40 pounds of unfinished. from 74 colonies; and I will have to feed 100 pounds of sugar for winter stores.

Well, such is the life of a bee-keeper in Missouri. I am thinking now of making a change, and I want to ask some questions:

1. Is Jasper Co., Nebr , a good place for bees? I am told there is lots of alfalfa there. If not, what part of Nebraska is the best for bee-keeping?

2. Can bees be wintered there on the summer stands in single-walled hives?

3. How many colonies can be shipped in a car? Please give instructions as to how to prepare bees for shipping, and how to load them in a car. Can the hives be placed on top of each other in the car?

4. How is Illinois for bee-keeping, say in Montgomery County? Missouri.

Answers.—1. Minute information as to particular localities is hard to be obtained except by personal visitation or information from some one on the spot. I don't know what are the best localities in Nebraska, and if I could name the very best locality in the State, it would be of no use to you if that locality is already fully occupied. If Jasper County has much alfalfa, that points toward a good place for honey.

2. Yes, if properly protected.

3. Perhaps 500. The hives must of course be fastened bee-tight, but with plenty of ventilation. The hives must be placed so the frames will run parallel with the track, so the bumping will strike the combs lengthwise and not sidewise. If there are no more than will stand on the bottom of the car—say 90 to 100 hives—the only fastening needed will be strips nailed to the floor so the hives can not move in any direction, the strips being 1 or 2 inches thick. If the hives are piled on top of one another, then they must be strongly fastened by braces running from side to side, or else from top to bottom; perhaps both.

4. I don't know, but it probably averages fairly with the rest of the State.

Fertilization of Queens

Does a queen become fertilized after 15 days? Does she stay in the hive, or what becomes of her? Kansas.

Answer.—A queen may be fertilized after she is 15 days old, but the chances for it are not the best. A queen that is not fertilized before that age generally disappears; I don't know for sure just what becomes of her. If, however, she remains in the hive, and is not fertilized, she will begin laying, her eggs producing only drones.

Swarming Methods and Surplus Honey

1. When we practice artificial swarming by the "shook swarm" method, why is it necessary, if at all, to shake the queen on the old stand and into the new hive? Is it because a swarm would be likely to issue if she should be left with the mother colony on the new location (even though all queen-cells were removed)?

2. If there is a reason why the queen should be left on the old stand with the "shook" swarm, then why, in the Sibbald plan of artificial swarming, is the queen left with the mother colony and placed on the new stand, reversing her location?

3. If bees will build drone-comb when no queen is present, are they not likely to do so in the Sibbald plan of artificial swarming until the first young queen hatches (when frames with only foundation are put in the hive on the old stand)?

4. I began bee-culture last May with 8 colonies of hybrids in 2-story 8-frame Langstroth hives, and not being able to stay at home to watch, I "shook-swarmed" them. None of the bees of the mother colonies went into the supers (extracting-supers). The "shook" swarms hardly filled the super, so I got no surplus. My neighbor who lives a half mile from me, in a location no better than mine, and with colonies no stronger, and hardly as strong, got 210 pounds of surplus honey from 3 colonies of the same kind of bees. He tiered up and got no swarms. Of course I, being a beginner, disturbed the bees quite a little in looking for queen-cells, to determine when to shake, and was probably somewhat awkward and nervous in doing the shaking, which made them so cross that it was almost dangerous to go near them for awhile. But why should I get so little honey compared with what my neighbor got from fewer colonies? I might add that we had plenty of clover bloom, but it rained so much that old bee-keepers got only half a crop. In other words, I suppose, the honey harvest was cut short by the rains, and would not that work against me more than against one who did not let his bees swarm, or did not divide them?

I have just bought and read with pleasure your elegant book, "Forty Years Among the Bees." Wisconsin.

Answers.—1. If the queen were left with the mother colony on the new location, and all queen-cells removed, there would be no likelihood of any swarm. No more would there be if all cells were left, for feeling their destitute condition, and with no field-bees bringing in any stores, the workers would themselves destroy the cells. So that's not the reason. The old colony would be the better for having the queen. But the swarm would suffer for want of it. A swarm without a queen—natural or artificial—would be in pretty bad shape. No brood would be reared, and the numbers would rapidly diminish, making the swarm in poor condition for storing; and the swarm is the part depended upon for the harvest, not the mother colony.

2. In the Sibbald plan the shifting of the old colony from side to side is intended each time to throw all its field-bees into the swarm, thus keeping up its strength till a young queen is reared from the queen-cells that in the first place were left in the swarm.

3. Queenless bees are little inclined to build comb of any kind. With 2 frames filled with comb they are not likely to build any at all, in the Sibbald plan, until the young queen emerges, and then they are ready to do a good business at comb-building, and all of it worker-comb.

4. Put it down as a fixed fact that in a location where the main harvest is rather early, and there is no heavy fall flow, any dividing of forces, either by natural swarming or otherwise, is sure to cut in on the crop. You can't have your cake and eat it, too, and if you take away from the strength of a colony to make another colony, that surely will take away part of your crop, and the earlier the closing of the harvest the worse it is to divide forces.

Excluder Zinc and Queen-Rearing—A Queen-Introducing Experience

1. In your plan of queen-rearing, do you use perforated or queen-excluding zinc to keep the queen in the upper story?

2. On Saturday, Oct. 7, I introduced a queen. The bees seemed to be all right all day. I was called away and my children, 16 and 12 years of age, watched them. On Sunday morning the bottom-board was covered with dead and crippled bees running out of the entrance and covering the ground all

around. There was indication of robbers and no fighting. What is your opinion of the cause? OHIO.

ANSWER.—1. The queen is in the lower, not the upper story. Queen-cells or virgin queens, caged in some way for protection, may be kept in the same story with the queen; but generally, for the sake of convenience, they are kept in an upper story over an excluder.

2. I don't know. It may be that a small vagrant swarm entered, and its bees were killed by the colony.

Feeding Bees for Winter

1. I started with one colony last spring, and now have 6. I am feeding some of them, and getting them ready for winter? Should I put the frames that are filled best in the center of the hive, and the poorest on each side? I use 8-frame dovetail hives.

2. How many pounds of syrup does it take to equal a pound of honey, if it is made of equal parts sugar and water. I suppose this is quite hard to estimate, but could you give me some idea? My bees may go through all right, but I think the hives are a little light to be safe. MINNESOTA.

ANSWERS.—1. I really don't feel sure just what is the best arrangement. Following the example of the bees themselves, it would be to have the outside frames entirely filled, and the upper parts of the central frames well filled. But you may not have exactly that kind of combs, and if you have combs that are entirely filled and others that are practically empty, it might be best to put the empty combs all at one side.

2. Take 5 pounds of sugar and 2 pounds of water, and you will have a syrup of about the consistency of honey. According to that, if you take 5 pounds of sugar and 5 pounds of water, and the bees evaporate it down to the consistency of honey, you will have about 7 pounds of the evaporated syrup. Not quite so much as that, for there is some loss in the evaporating. But look here, my good friend, you're not thinking of feeding equal parts of sugar and water, are you? That would be all right for August, and even early in September, but as late as this the proper proportion is 5 pints or pounds of sugar to 2 pints or pounds of water. And next year please get your feeding all finished before it is so late.

Reports and Experiences

Honey Almost a Failure

The honey crop is almost a total failure. I have none to sell from 60 colonies.

J. W. JOHNSON.

Stephenson Co., Ill., Oct. 2.

Long Season for Bees

This has been a long season here for bees to gather nectar. My bees have worked a greater number of days since April 1 and up to the present time than ever before in my recollection in one season.

W. E. WILLIAMS.

Hillsdale Co., Mich., Sept. 22.

Records of Good Queens

On page 620, E. J. Bryant, of Kane Co., Ill., gives this queen record: "I got the queen in 1904. Last spring the colony was very strong, and was divided June 15. A monster swarm issued on July 5, and on July 13 another swarm, making 4 swarms [should be 4 colonies], and the honey product is 200 pounds from one queen, or, in other words, from 4 colonies".

Now I will give the record of another good queen:

The first swarm I had this year issued June 25. I gave the colony from which it issued a super for comb honey to prevent an after-swarm. This virgin queen would not hatch; left the hive and began to lay before July 4; on the 10th I had to give 2 more supers, which were all filled by the 28th, and on Aug. 15 I had taken off 136 finished sections; on Sept. 25 they had completed 48 more, and had 24 more about ½ drawn out, making 184 finished sections. This is the individual record of a young queen. Who has one that will beat it? I call her a good queen.

The swarm that issued stored 72 sections. If I double them up, giving the record of the old queen, like Mr. Bryant did, it would read: 2 colonies, and 256 sections of comb honey. But I can not see how it is right. I believe in individual records.

I do not know whether the tongues of my bees are long, or whether their wings are strong, but I do know they are hustlers, and there has been scarcely a day but what from 1 to 2 quarts of bees have hung out in front; with 3 or 4 supers on to-day, fully 2 quarts of bees are hanging out, with a partly drawn super. But the harvest is over.

T. R. G. WELCH.

Morgan Co., Utah, Sept. 27.

Maple-Leaved Goosefoot

I send a plant found in a corn-field that grew quite large, and was loaded with bloom, and bees were working on it very freely. I have never seen anything like it before.

This has been a poor season, only about half a crop of honey. Still I would not do without the "old reliable" American Bee Journal. E. C. MESSING.

Randolph Co., W. Va., Sept. 27.

[The plant is the maple-leaved goosefoot or pigweed—*Chenopodium hybridum*—and is so named because the leaf resembles that of the maple. It is not an exceptionally good bee-plant, but may yield some nectar.—C. L. WALTON.]

Drawn Sections Changing Color

On page 683 is a question asked by one who signs himself "Ohio," about his "combs turning straw color if left on the hive over winter," and Dr. Miller replies that he "never knew such change of color," etc. I never used "bait-combs" until last spring, when having a lot of sections filled about one-quar-

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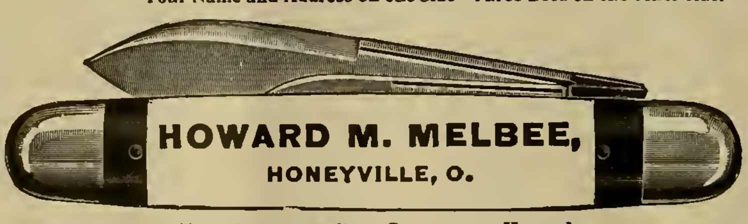

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ter or one-half of sealed comb, I used them by placing one in the center of each of my first supers, and, *invariably*, when I removed those supers in order to case the honey, those bait-sections were a light *amber* if the balance were snow white; and a dark brown if the balance were light amber. It seems strange, and I, myself, can not account for it. I will repeat the plan next season, and see if the bees will also repeat the process on their part.

I write this thinking others may have had the same experience as myself. I tried this over 100 hives, so it was not to be attributed to a few "freak bees." W. N. ROOT.

Christian Co., Ill., Oct. 3.

A Correction

EDITOR YORK:—In the last paragraph of my article on page 695, I am made to say, "Although I have given the foregoing but little thought," etc. It should read, "Although I have given the *following* but little thought," etc. When I read the article I thought that I probably had written the word "foregoing" instead of "following," but on examining the original copy I find the word "following" written.

L. V. RICKETTS.

Whitman Co., Wash., Oct. 14.

Sowing Alfalfa Clover Seed

Replying to "Missouri," page 700, regarding the sowing of alfalfa clover seed, I would say the best results are generally obtained by sowing in August, using ground that has grown a crop of oats, barley or wheat. As soon as possible the grain should be hauled off the ground and either stacked or thrashed, and 10 loads of manure to the acre be spread on the ground once. The ground should then be double-disked, harrowed, and left until about Aug. 10, when it should be again disked, harrowed, seeded, and reharrowed to cover the seed. Twelve to 15 pounds of seed to the acre is sufficient. It is a good plan to sow about half the seed on the field the first time over, and then cross the field, sowing the other half. This will insure a more even distribution of the seed.

The alfalfa should make a good growth in the fall, and not less than 3 good cuttings of hay should be made the following season, and 4 if conditions are favorable.

Remember that it is necessary to make the first cutting early, generally not later than June 1, even though the weather is such that the crop can not be cured. I sowed 35 acres of alfalfa on Aug. 8, and it is now over 15 inches high all over the field.

CHAS. WINKLER.

Adams Co., Nebr., Oct. 6.

The National Bee-Keepers' Association holds its annual convention at the Revere House, corner of Clark and Michigan streets, in Chicago, during the Fat Stock Show, when exceedingly low rates may be secured on the railroads. The dates for the meeting are Dec. 5, 6 and 7. Rates at the hotel are 75 cents for a room alone, or 50 cents each, where two occupy the same room. Meals are extra, or they may be secured at near-by restaurants.

W. Z. HUTCHINSON, *Sec.*

Minnesota.—On account of the National Bee-Keepers' Convention at Chicago on dates conflicting with ours, the Executive Committee has decided to postpone the usual annual meeting of the Minnesota Bee-Keepers' Association until further notice.

MRS. W. SWINGATE, Sec.

Illinois.—The 15th annual meeting of the Illinois State Bee-Keepers' Association will be held in Springfield, on Tuesday and Wednesday, Nov. 21 and 22, 1905, at the G.A.R. Hall in the Court House. The good results of this meeting rest on the members who attend it. Our State gives us an appropriation to publish our report and to suppress foul brood, and it is the duty of every bee-keeper of the State to have a voice in the manner in which this appropriation is used. All bee-keepers are invited to come, and bring their wives. The railroad rates will not be higher than an open rate of one fare and a third for the round trip, and efforts are being made by our Odd Fellow friends to secure a one fare for the round trip. Good hotel accommodations can always be had at reasonable rates. JAS. A. STONE, Sec.

Route 4, Springfield, Ill.

THE ONLY LOCK

Corner that is perfect is made by us. It can not be otherwise. The end rabbet runs by and nails to the sides. Can't split off nor warp. **Perfect in every way.** Lumber of the best quality. **DISCOUNT**—well, it will **ASTONISH** you. **All kinds of Supplies.** Write your wants.

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LANSING, MICH.

39Dtf Please mention the Bee Journal.

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Until March 15. Dovetail Hives, 8-frame, 1½-story, $1.25; 10-frame, $1.40; No. 1 bee-way Sections, $3.90; No. 2, $3.40; 24 lb. Shipping-Cases, 13c; Foundation, Smokers, etc., cheap. Send for 24-page Catalog free.

W. D. SOPER,

Rural Route 3, JACKSON, MICH.

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This pen is absolutely guaranteed to work perfectly, and give satisfaction. The Gold Nibs are 14 kt., pointed with selected Iridium. The Holders are pure Para Rubber, handsomely finished. The simple Feeder gives a uniform flow of ink. Each pen is packed in a neat box, with directions and Filler.

How to Get this Fountain Pen Free!

To a present paid-in-advance subscriber, we will mail this Fountain Pen free as a premium for sending us 3 NEW SUBSCRIBERS to the weekly American Bee Journal for one year (with $3.00). Surely, this is an easy way to get a good Fountain Pen. Or, if unable to get the new subscribers, and you want one of these Pens, forward to us $1.25 and we will send it to you by return mail. Or for $2.00 we will send to any one the American Bee Journal for one year and a Fountain Pen.

This Fountain Pen would be a splendid gift to a friend or relative. Why not order both Pen and Journal for some bee-keeper as a present?

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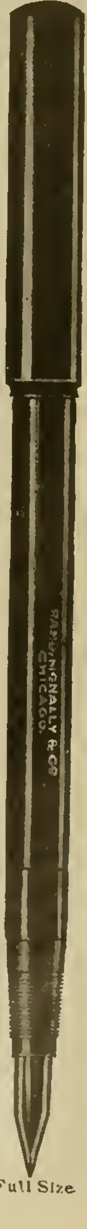

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Before November	9 percent discount	Before February	6 percent discount
" December	8 " "	" March	5 " "
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Ask for special list now, free.

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Such as Shipping-Cases, Tin Cans, Buckets, **Glass Jars with patent spring sealers and glass stoppers;** regular Glass Fruit-Jars, etc. Sample cases for sending samples of extracted honey by mail. Special prices on Glass Honey-Jars and Tin Buckets.

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We can ship by return freight at the following prices:

½-lb. Jars with corks—1 case of 21 doz. for $5.50; 3 cases, $15.50.

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Second Hand... Comb Foundation Mill

We have for sale a 6-inch Second-Hand Comb Foundation Mill. Used scarcely any; good as new. If interested write for price.

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Dec. 1	8 "	March 1	4 "
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We handle **LEWIS' GOODS**, and carry a large stock, which insures prompt shipment. Catalog free. Address,

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FOR SALE HONEY-JARS

The No. 25 Honey-Jar, Porcelain Cover, Metal Screw Cap, absolutely tight, holding One Pound of Honey, Net, in shipping-cases of one gross each:

1 gross lots	$4.50 per gross
5 " "	4.00 "

Also in strong **RE-SHIPPING CASES** of two dozen each, heavy corrugated partitions, sides, top and bottom—a perfect protection—

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5 case lots, per case,	3 doz	85c
10 " "	"	80c
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Engravings For Sale

We are accumulating quite a stock of engravings that have been used in the American Bee Journal. No doubt many of them could be used again by bee-keepers in their local newspapers, on their stationery, or in other ways. Also, if we can sell some of them it would help us to pay for others that we are constantly having made and using in our columns. If there is any of our engravings that any one would like to have, just let us know and we will quote a very low price, postpaid. Address,

GEORGE W. YORK & CO.
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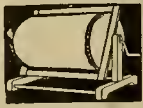

kills all lice and mites. No injury to birds or feathers. Handles any fowl, smallest chick to largest gobbler. Made in three sizes. Pays for itself first season. Also *Lightning Lice Killing Powder, Poultry Bits, Lice Murder, etc.* We secure special low express rates. Catalog sent free. Write for it.

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4 Largest Sizes Soot Burning

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Original
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Tin 4-in. Smoke Engine 3½-inch 3-inch 2½-inch 2-inch Wonder
$1.50. $1.10. $1.00. 90c. 65c—per mail.

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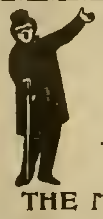

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We will allow you the above Discount on all Orders accompanied by Cash during November. Send for our Catalog.

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Lowest Prices

Big Discount for Early Orders

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Before November 1..................9 percent
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We believe it would pay those having it in car lots or otherwise to write us. Give us your lowest spot cash prices, and fully describe the goods and style of package; when you can ship, etc. We handle more of these goods than any other firm in the U.S. Yours for business,

THOS. C STANLEY & SON, Bees and Honey
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WANTED

Fancy White Comb Honey in Non-Drip Shipping-Cases; also White Clover Honey in cans and barrels. Please send samples and state your lowest price, delivered here. We pay **spot cash** upon receipt of goods.

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Until further notice, finest quality new crop California Water-White White Sage and Light Amber **HONEY** in 60-lb. tins, 2 in a case; new cans and new cases Write for prices and samples, and state quantity you want.

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ESPECIALLY FOR THE SOUTH, AS ALL FREIGHT NOW GOES THROUGH CINCINNATI.

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OCTOBER

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At Root's Factory Prices

C. H. W. WEBER CINCINNATI ...OHIO...
Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

Honey and Beeswax

CHICAGO, Oct. 5.—The demand for comb honey is about as usual for the season of year. Offerings from the surrounding States are fully equal to past season, but that from Colorado and the Middle Western States are not. No. 1 to fancy white comb honey sells at 13@14c, with an occasional sale at 15c; the off grades embracing crooked combs, etc., sell at 11@12c; amber grades difficult to place at 9@10c. Extracted, white, 6@7c, according to kind, body and flavor and package; ambers 5½@6½ cents. Beeswax selling upon arrival at 30c if clean; off grades about 2c per pound less,

R. A. BURNETT & CO.

CINCINNATI, Oct. 6.—Reports from different parts of the country give evidence of an almost total failure in the comb honey crop, excepting the points in the North. We are selling this Northern comb honey at from 14@16 cents per pound, by the case. The demand for extracted honey is about equal to the receipts, which are good. We continue to sell amber in barrels at 5¼@6c; white clover at 6½@7½c. For beeswax we are paying 30c per pound, cash, delivered here.

(We wish to call the attention of the producer to the above honey quotations, who mistakably expects to receive these prices for his product. The above are our selling prices.)

THE FRED W. MUTH CO.

NEW YORK, Sept. 22.—New crop is beginning to arrive quite freely from New York State and Pennsylvania, and is in fair demand at 14c for fancy white, exceptionally fine quality may bring 16c; 13c for No. 1 white, and 11@12c for No. 2 white and amber; no buckwheat on the market as yet. Extracted, in good demand at last quotations. Beeswax, firm and scarce at 29@30c. HILDRETH & SEGELKEN

INDIANAPOLIS, Oct. 12.—There is a good demand for strictly fancy white comb honey, demand and supply running about even. Demand for lower grades of comb honey not good. Numerous shipments of honey arriving, but no one producer seems to have very great quantities to offer. I quote fancy white at 15@16c; No. 1 in poor demand at 12c, and amber dull at 10c. Best grade extracted brings 8@9c in 60-lb. cans; amber slow at 5c. Beeswax, 28@30c.

WALTER S. POUDER.

CINCINNATI, O., Oct. 7.—The nice weather holds back the demand for comb honey. Crops seem to be exceedingly short and producers in the West keep the price high. We quote fancy water-white comb honey No. 1 white clover from 14@16c; No. 2 from 12½@14c. Extracted seems to be more plentiful. In barrels, light amber, 5¼@5½c; in cans, ½c more. White clover from 7@8c. Beeswax, 26c.

C. H. W. WEBER.

KANSAS CITY, Oct. 9.—The honey market here at present is very strong at $3.25 per case for No. 1 and fancy white comb in 24-section cases; amber and other grades selling for less; according to quality. Extracted in good demand at 6½c. Beeswax, 28c.

C. C. CLEMONS & CO.

ALBANY, N. Y., Sept. 21.—Honey demand improving here as the season advances, and as next month is the best month we look for good prices. Buckwheat comb is scarce; that is, straight buckwheat. We quote fancy white, 15c; No. 1, 14c; mixed, 13c; buckwheat, No. 1, 13c; mixed, 12@12½c. Extracted, white, 7@7½c; mixed, 6½@7c; buckwheat, 6½ cents. Beeswax, 28@32c. H. R. WRIGHT.

TOLEDO, Oct. 17—The honey market remains firm, with good demand, and prices the same as last quotations. Fancy white comb brings 15c; No. 1, 14c; fancy amber, 13c; buckwheat, 13c. Extracted, white clover, in barrels, 6¼@6½c; amber, in barrels, 5@5¼c; in cans, 1c to 1½c higher. Beeswax in good demand, 26c cash, 28c trade. GRIGGS BROS.

PHILADELPHIA, Oct. 19.—Honey has been arriving freely in the last 10 days. There are still some small producers who have a few hundred pounds, and want to dispose of it quickly and get their money, who are keeping the prices down. We quote: Fancy white, 14@16c; No. 1, 13@14c; amber, 10@11c. Extracted honey rules firm at 5½@6½c for amber; 6½@7½c for white. Beeswax firm, 28c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

SAN FRANCISCO, Oct. 11.—White comb, 1-lb, sections, 8@9cents; amber, 6@7c. Extracted-water-white, 5@—c; white, 4½@4¾c; light amber, 3¾@4 cents; amber, 3@3½c; dark amber, 2½@3c. Beeswax, good to choice, light, 25@27c.

There is little activity in the local honey market, as dealers and growers do not seem able to make their ideas in regard to prices conform. At the present rate of demand, dealers do not feel warranted in paying more than 4c a pound for extracted honey and 8c a pound for comb honey, choice basis. On the other hand, growers are aware of a scarcity in some sections and are holding for higher prices. A prominent bee-man of Bakersfield says that the honey crop of the county is a little above the average this year, but the price is small. Extracted honey is only bringing about 4 cents a pound. The extracting for the season is about completed.

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If so, be sure to make your headquarters

AT OUR CHICAGO AGENCY,
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141 and 143 Ontario Street,
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Where you will be cordially welcomed, and where all information can be obtained regarding Convention and city.

Respectfully,

G. B. LEWIS CO.

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LEWIS' NO. 1 FINE WHITE POLISHED SECTIONS

1,000	@$4.55	per thousand
2,000	@ 4.43	"
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AMERICAN BEE JOURNAL

45th Year CHICAGO, ILL., NOVEMBER 2, 1905 No. 44

Mr. and Mrs. Julius Hammer, of Eau Claire Co., Wis.
(Mrs. H. was Bessie Dittmer, eldest daughter of Gus Dittmer.
See marriage notice on page 710.)

No. 1.—Home apiary of Otto Luhdorff,
of Tulare Co., Calif.

LUHDORFF'S
GOLDEN
CALIFORNIAN
QUEENS.
SEPT. 15.
235 Pds.
O. LUHDORFF
They cap white.

No. 2.—Mr. Luhdorff's Hive on Scales, with Frame
of White Honey.

(See page 758)

LUHDORFF'S
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QUEENS.
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THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY
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1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00

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(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

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1. Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.
2. Any honey-dealer, bee-supply dealer, bee-supply manufacturer, bee-paper publisher, or any other firm or individual, may become a member on the annual payment of a fee of $10, increased by one-fifth of one (1) percent of his or its capital used in the allied interests of bee-keeping.

GEORGE W. YORK, Manager,
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We are making special discounts on all kinds of BEE-SUPPLIES, to keep our factory busy. You can save much money by sending us a list of your needs. The price we will name you, will prove what we say.

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Power Building, - - MINNEAPOLIS, MINN.

H. M. ARND, Mgr.

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LEWIS' BEE-WARE
AND MAKE YOUR HEADQUARTERS AT
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Catalog and prices on Honey on application.
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Good Goods at Factory Prices and Prompt Shipment, send your orders, or call on us.
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NAME OF GRADE	1-lb.	5-lbs.	10-lbs.	25-lbs.	50 lbs.
Medium Brood	.55	.53	.51	.49	.48
Light Brood	.57	.55	.53	.51	.50
Thin Surplus	.62	.60	.58	.56	.55
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"	October	9 "
"	November	8 "
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"	April 1	"	2 "

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Local Dealers In addition to the following list who carry large stocks, and furnish at both *wholesale and retail*, we have in every State a large number of local dealers who handle our goods exclusively. As there are over 500 of these dealers, space will not permit giving their names at this time; but information will be given by us, on request, to any bee-keeper regarding the dealer nearest him handling Root's Goods.

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GEORGE W. YORK, Editor
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Editorial Notes and Comments

Convention Going

We have received the following from Mr. R. F. Holtermann, one of Canada's "convention goers:"

> EDITOR AMERICAN BEE JOURNAL—
>
> Your statement about going to conventions can not be too strongly endorsed. I have gone to more North American, International, and now National, conventions than any other Canadian. I have also attended a great many conventions in Canada, and spent a considerable sum in *my education* in this direction. I look upon it as a business investment which has paid me well.
>
> To get the greatest benefit from conventions, we must not be as pliable as putty, and have our ideas moulded by every new person who takes hold of us; but we must be unprejudiced, and open to solid reasoning. People who think they have reached perfection will not—yes, can not—learn anything more; but to others a convention properly conducted must be profitable.
>
> I have this season, from 296 colonies, spring count, secured a good, fat 60,000 pounds of honey, and have had to do no feeding for winter. I want no system which artificially or otherwise breaks up colonies, and I believe I have come closer than anything I have yet seen or heard of, to increase now in the production of extracted honey. I have some points which I have not seen brought out.
>
> I hope to be present at the coming National convention in Chicago.
>
> R. F. HOLTERMANN.

The American Bee Journal has always been a strong supporter of conventions among bee-keepers. It feels encouraged to know that so able a bee-keeper as Mr. Holtermann also endorses its stand on the subject. Any bee-keeper who desires to make the greatest success of the business of honey-production makes a large mistake if he fails to attend conventions. Of course, sometimes it may be utterly impossible to go, and, if so, that is to be regretted. But a big attempt should be made to "get there," especially to the larger State and National conventions.

Every bee-keeper who can possibly arrange to attend the National convention here in Chicago next Dec. 5, 6 and 7, should do so. We do not say this because it is to be held in Chicago, but because it is the National organization of bee-keepers. It is the largest thing of its kind on this continent, and has done more for American bee-keeping than any other similar organization. It can, and will, do much more along the same line. But in order to do so, it must have the hearty co-operation of just as many live bee-keepers as possible.

Come to the National convention, Dec. 5, 6 and 7.

◆

Cakes of Beeswax Without Cracks

More than once in these columns the advice has been given to cover up warm so the wax shall be a long time cooling, or to put the wax in the stove oven at night, leaving it there all night so as to cool off slowly as the stove cools off. Evidently this hardly applies to large quantities, the size of the cake being limited by the size of the vessel admitted by the oven.

In Gleanings in Bee Culture Leslie Burr says the only practical way with large quantities is to dip the wax from one tub into another. The cracking is caused by the fact that the outside part of the cake becomes solid while the central portion is still hot. When the hot wax is poured back and forth from one tub to another, the whole mass becomes cooled more uniformly, hence no cracking.

◆

Points in Moving Bees

Migratory bee-keeping seems to be more in vogue in Australia than in this country. From a symposium in the Australasian Bee-Keeper on the subject of moving bees, the following points are taken:

In place of wire-cloth for ventilation, bagging or hessian (burlap?) may be used, both on top and at the entrance.

Remove all combs filled with honey, and replace with empty ones placed in the middle of the brood-nest.

Make all preparations that can conveniently be made the night before, so an early start can be made on the journey the following morning. (In Germany the start is sometimes made not long after midnight.) Chas. U. T. Burke says:

> "I would only take one load each day, starting each time at daylight. If you have them shut up, and shift them in a broiling sun, many will be smothered, and what are alive would take a week or more to recover, so always shift your bees as quickly as possible as early in the morning as you can. Hives have time to cool down through the night, whereas if you shift them at night they are quite hot from the heat of the day, and all hands disagreeable at being disturbed."

To make the bees mark their proper locations more certainly, pile green bushes or grass at entrances, leaving them there two or more days.

J. A. Hutchinson advises that heavy twine be used to fasten the harness-tugs to the whiffletrees, so that if anything happens that makes it desirable to unhitch the team quickly, the strings can be cut.

◆

Rubber Bands for Transferring

Grant Stanley suggests in Gleanings in Bee Culture that instead of strings and splints, rubber bands be used to hold combs in frames after the pieces are transferred. Then when the bees have had time to fasten the combs in place, cut the bands by running a sharp knife lengthwise over the top-bars.

◆

Definition of Honey Explained

To those who are familiar with what has been said as to the Government definition of honey, the following circular is self-explanatory:

> EXPLANATION OF STANDARD FOR HONEY.
>
> On Dec. 20, 1904, the Secretary of Agriculture, acting under authority of Congress, and upon the recommendation of the Committee on Food Standards of the Association of Official Agricultural Chemists, proclaimed the following standard for honey:
>
> "Honey is the nectar and saccharine exudations of the plant, gathered, modified, and stored in the comb by the honey-bee (*Apis mellifica*). It is lævo-rotatory, contains not more than twenty-five (25) percent of water, nor more than twenty-five hundredths (0.25) percent of ash, and not more than eight (8) percent of sucrose."
>
> This standard was adopted after careful publication of an earlier suggested standard as a basis of criticism, and after careful consultation with leading authorities in apiculture.
>
> Since the standard was issued many letters

have been received from bee-keepers representing many of the States of the Union, expressing a desire that the standard should be changed so as to avoid the exclusion from standard honey of all honeys that contain honey-dew. In support of this plea, it is urged that the bee-keeper is unable to prevent the introduction of some honey-dew, whether taken directly from the plant or from the aphis, and that small quantities of this material are not injurious to the honey.

These requests being brought to the attention of the Committee on Food Standards at its meeting in Chicago, beginning May 29 last, the committee adopted the following minute:

"The standard does not in any way exclude small quantities of honey-dew from honey. We realize that bees often gather small quantities of honey-dew that can not be detected in the finished product by chemical means, and does not damage its quality. It is only when relatively large amounts are gathered that the quality of the honey is impaired, and it fails to meet the requirements of the standard. It is generally agreed that such a large amount of honey-dew is injurious to the quality of the product, which can not then be properly regarded as honey."

Bee-keepers have reason to be thankful for this ruling, which seems evidently to have been framed with a sincere desire to be fair to the producers of honey, and at the same time to protect the interests of the consumers. Indeed, whatever is to the interest of the consuming public is, in the final analysis, to the interest of the producer.

It now lies with bee-keepers to be so careful as to the quality of the honey they put upon the market that the confidence of consumers may constantly be more firmly established that when they buy anything under the name of honey they are buying the pure article from the laboratory of the busy little denizens of the hive.

There is no disputing the fact that there are exceptional cases in which bees store that which is not desirable as an article of food; also that the best of honey may be so treated as to be unpresentable. But no complicated analysis is necessary to distinguish such product. It is only necessary to taste it; and the man who puts it on the market is a fool or a knave, or both.

◆

Fencing Bees with Barb-Wire

Mention is made in the Australasian Bee-Keeper of an apiary thus enclosed. The hives are placed with their entrances close up to the fence. This does not obstruct the flight of the bees, but allows cattle and horses to eat down the grass close up to the entrance of the hives, and also allows a smaller space of ground to be enclosed.

Possibly some one on this side of the globe may have tried this, and will be kind enough to give us the advantages and disadvantages of the practice.

The Truth About Honey.—A few changes have been made in the reading of the Comb Honey Guarantee Circular for shipping-cases gotten up by The Honey-Producers' League, so that it will be suitable for bee-keepers to use in their correspondence, putting one in with every letter they write. It is headed, "The Truth About Honey," and is printed on both sides of a light manilla cardboard. It is sent postpaid in lots of 50 for 10 cents, 100 for 20 cents, etc. Every bee-keeper should use it, as it will undoubtedly help to popularize the use of honey.

The Guarantee Circulars for putting in shipping-cases should be used by every bee-keeper who sells comb honey by the case. These circulars are the same price—10 cents for 50 copies, postpaid. Send all orders to the American Bee Journal office.

Miscellaneous News Items

Home-Apiary of Otto Luhdorff.—On the first page are shown some pictures sent us by Otto Luhdorff, of Tulare Co., Calif. When sending them he wrote thus:

I am enclosing 3 pictures. No. 1 is my home apiary, consisting of some 75 colonies on a lot in a city which has about 5000 inhabitants. I never had any trouble with my neighbors on account of my bees; they are very tame—I mean the bees, not the neighbors. The hives are standing in the shade of fruit-trees.

No. 2 is a hive on scales which weighed on Sept. 15, 235 pounds, now (Oct. 7) over 240 pounds—the limit of the scales. In front of the hive is a frame of honey which shows how white the bees cap their combs.

No. 3 is the same hive and a frame of queen-cells. The bees accepted every cell; rather unusual, at the same time a very strong colony. All brood was capped and young brood always hatching, which was favorable for the development of cells.

The bees are a little side-issue with me, as I drifted into bee-keeping for pleasure.

Otto Luhdorff.

◆

Illinois Fair Premiums.—The winners of premiums in the bee and honey department of the recent Illinois State Fair are as follows:

Display of comb honey—1st, Aaron Coppin; 2d, C. Becker; 3d, Geo. M. Rumler.

White comb honey—1st, Jas. A. Stone & Son; 2d, Aaron Coppin; 3d, C. Becker.

Amber or dark comb honey—1st, C. Becker; 2d, Jas. A. Stone & Son; 3d, Aaron Coppin.

White clover comb honey—1st, Jas. A. Stone & Son; 2d, A. Coppin; 3d, C. Becker.

Sweet clover comb honey—1st, Louis Werner; 2d, Jas. A. Stone & Son; 3d, A. Coppin.

Basswood comb honey—1st, Jas. A. Stone & Son; 2d, Aaron Coppin; 3d, C. Becker.

Display of extracted honey—1st, Jas. A. Stone & Son; 2d, C. Becker; 3d, A. Coppin.

Honey extracted on the grounds—1st, Jas. A. Stone & Son; 2d, C. Becker.

Frame of comb honey for extracting—1st. C. Becker; 2d, Louis Werner; 3d, A. Coppin.

Display of candied honey—1st, C. Becker; 2d, Jas. A. Stone & Son; 3d, Aaron Coppin.

Display of beeswax—1st, C. Becker; 2d, Jas. A. Stone & Son; 3d, Aaron Coppin.

Dark Italian bees—1st, Aaron Coppin; 2d, Louis Werner; 3d, C. Becker.

Golden Italian bees—1st, Aaron Coppin; 2d, Louis Werner; 3d, C. Becker.

Carniolan bees—1st, Louis Werner; 2d, C. Beckerr 3d, Aaron Coppin.

Honey-vinegar, ½ gallon, with recipe for making—1st, Jas. A. Stone & Son; 2d, C. Becker; 3d, Aaron Coppin.

Display of designs in honey—1st, Geo. M. Rumler; 2d, Aaron Coppin; 3d, C. Becker.

Display of designs in beeswax—1st, Jas. A. Stone & Son; 2d, Aaron Coppin; 3d, C. Becker.

◆

Prime German Candy Honey.—This nation is frequently credited with being chief in the matter of humbuggery and adulteration. Of late, however, at least in matters that specially interest bee-keepers, the Yankee nation is in danger of losing its dizzy eminence as faker-in-chief. In Europe, thousands of wax-presses are in use by bee-keepers, who make their own foundation, a chief reason for this being the fact that it is difficult to buy foundation that can be relied upon as unadulterated. Some specimens on the market show upon analysis 72 percent of paraffin and only 28 percent of wax. In this country the difficulty would be to find any sample of foundation not absolutely pure.

There is no attempt to dispute that in this country glucose has been used to a large extent as an adulterant. But too great publicity is not courted by those who sell something under the guise of honey which contains in it nothing that has ever been in the honey-sac of a bee. Dealers in pure honey in this country are not likely to be approached with offers of bargains in the adulterated stuff. For brazenness in that line, pre-eminence must be accorded to adulterators across the water, as is shown by a letter received at this office direct from the "North German Honey and Wax-Works." Enclosed with the letter was a "Price-list of prime candy honey"—very queer tasting stuff—sold in wooden casks, wooden pails, tin boxes, enameled pails, glasses, and tins, at prices varying according to style of package from 3⅛ to 9⅝ cents a pound.

"The Honey-Money Stories."—This is a 64-page-and-cover booklet, 5¾x8½ inches in size, printed on enameled paper, entitled, "The Honey-Money Stories." The cover has a picture of a section of comb honey, 3½ inches square, the comb being in gold-bronze, which gives it a very attractive appearance. Then on the gold-bronze comb are printed these words: "From Honey to Health, and from Health to Money."

It is edited by Earl M. Pratt, and contains a variety of short, bright stories interspersed with facts and interesting items about honey and its use. The manufactured comb honey misrepresentation is contradicted in two items, each occupying a full page, but in different parts of the booklet. It has in all 31 halftone illustrations, nearly all of them being of apiaries or apiarian scenes. It also contains 3 bee-songs, namely, "The Hum of the Bees in the Apple-Tree Bloom," "Buckwheat Cakes and Honey," and an entirely new one, called, "The Bee-Keeper's Lullaby." This last song has not been published before. The songs alone ought to be worth more than the price of the whole thing.

It is a booklet that should by placed in the hands of everybody not familiar with the food value of honey, for its main object is to interest people in honey as a daily table article. It is thought that it will be just the thing to sell on railroad passenger trains, on news stands, etc. The stories and items are all so short and helpful, and the pictures so beautiful, that it likely will be kept by any one who is so fortunate as to get a copy of it. Its postpaid price is only 25 cents, but the health-value of its contents would run up into dollars. We mail 5 copies for $1.00, or club it with the American Bee Journal—both for $1 10. It would be very nice for a gift to a friend. Send us a six months' *new* subscription for the American Bee Journal with 50 cents, and we will mail you a copy of "The Honey-Money Stories" free as a premium.

◆

Comb Honey Not Machine-Made.—We have a fair supply of the typewritten letter on this subject, which appeared in the Chicago Daily News of June 21, 1905. It is just the thing to have published in every bee-keeper's local newspaper. We mail it for a 2-cent stamp. Better order several copies, and request as many newspaper editors to publish it. It will certainly be a good thing for both the reading public and the bee-keepers.

Contributed Special Articles

Caring for Comb Honey After Taken Off the Hive

BY G. M. DOOLITTLE

"WILL you please tell us through the columns of the Bee Journal how to take care of comb honey after it is off the hive; that is, from the time it is taken from the hive till it is taken to market? I am a beginner in the bee-business, and when I took off my honey I put it in a cool room on the north side of the house, thinking that this would be a good place for it; but some way, now that I am preparing it for market, it does not look as good and white as it did when I took it from the hive, and the honey that is in the few unsealed cells next to the wood of the section, runs out if I tip it the least bit sidewise. What is the trouble?"

I doubt if there ever was a season since I have written about bees when I had so many inquiries about the care of comb honey as now, and from the letters received it would seem that, owing to the generally poor season in most parts of the country, the honey the bees obtained was thinner or less evaporated than usual. But, to the question:

The first requisite for caring for comb or section honey, after taking it from the hives, is a good, warm room in which to store it. Don't for any reason store it in the cellar, as so many beginners seem prone to do, nor make the mistake the questioner did, of storing it in a room on the lower floor on the north side of the house, for this is nearly as bad as in the cellar.

It seems strange to me that nearly every one who has not been told better, will take it for granted that honey should be stored in a refrigerator, or some place as cold as can well be found. If they would stop to think a moment, they would know that the place where the bees keep it is *warm*, and the bees are models for keeping honey. The warmer honey can be kept the better, till a degree of 100, Fahr., is reached, and to secure such a high temperature without being obliged to keep a fire, quite a few of our most practical apiarists put it in an upper chamber or the attic. In this way the rays of the sun shining all day directly on the roof warms the room and the honey up to near this 100, Fahr., point, and the honey being thus warmed during the day holds the heat till well toward morning, so that it is thickening and ripening in such a place very much the same as it would were it left with the bees. The only objection that can be brought against such an upper room is the amount of heavy work required in lugging the honey up and down the stairs. Where an elevator can be used, such a place is just the thing.

As a body of honey once thoroughly warmed will hold the heat for a long time, the average temperature of such a room on the south side of the house will be pretty high, ranging from 80 to 100 degrees the most of the time up to Oct. 1, thus ripening the honey splendidly. The object of this is to have the honey growing better and better, instead of poorer (as did that of our correspondent in his lower north room), and that from the moment it leaves the hives, this causing the honey in those unsealed cells—where there happens to be any around the outside of the comb next the wood, which is spoken of above—to become so thick that it will equal any in the section. Ofttimes it is better not to wait until these unsealed cells next the wood of the sections are *all* sealed over, for to wait for them to be so is often a great waste of time, especially so for those sections near the outside of the surplus arrangement. When the honey is taken from the hive, that in the unsealed cells is often so thin that if the sections are held so the mouths of the cells are down, it will leak or run out badly; but by leaving it in a warm room, as above, for three weeks or a month, it can be handled as you please, tipping it over, etc., and not a drop of honey can be shaken out. And after it gets to market, if it is stored in a damp, cool place, it will be some time before it will take on moisture enough to affect it to any great extent.

Perhaps all will not agree with me; but I think that all comb honey should be stored in such a room at least a month before casing or sending to market, to ripen, or "sweat out," as it is more usually termed. I know that it is a saving of time and labor to case it as soon as it is taken from the hives; but I think it pays for all the extra time and labor required, in the better quality and appearance of our product.

Having moved to the old Doolittle homestead during the past year, and there being no place for keeping honey except the chambers, I have built a place for the same, not wishing to perform all the labor necessary to keeping it in an upper room. This building is in the form of a "lean-to" on the south side, it being 12 feet wide and 24 feet long, the 24 feet being east and west, with the one-sided roof slanting toward the south. This roof and the three sides have been painted with what is known here as "Venetian red," and the sun heats it up, even after quite a cold night, to from 80 to 90 degrees by 10 a.m. When it gets up to about 100, the windows are opened so that the air, coming through the screens on them, can carry out all moisture, and thus I have it hot and dry on every sunshiny day. At night the windows are closed, and they are left thus except when the mercury rises above 90.

When the honey was taken off, the first super was set on 2 inch square blocks, one under each of the 4 corners, the blocks resting on the floor. Then on each of the 4 corners of this super were placed 4 1-inch square blocks, on which to set the next super, and so on till a pile of 10 supers high was reached, when a new pile was started. In this way there was a 2-inch space (under) between the first super at the bottom and the floor; and an inch space between each and every (other) super. This allowed the heat and air to circulate under, above, and around every section of honey in every super, and when I came to get the honey ready for market a few days ago, I never had honey any better ripened before. Some of it used on the table was so thick that even the honey in the unsealed cells next the wood of the sections would stay almost half a day before dropping out, where the knife was used in cutting the comb of honey out for use. I am much pleased with the result, and especially as it is an easy matter to handle the honey for all purposes from this room.

Onondaga Co., N. Y.

⁂

Work in the Apiary for November

BY C. P. DADANT

IF you have not removed all the supers during October, the cool mornings of the early part of November must be used for this purpose. It is well to examine the hives and make sure that none of the entrances are too deep; that is, deep enough for mice to go through, as there is greater danger of disturbance from mice in the very coldest weather. A very strong colony may get rid of the mice, but an average colony which does not cover all the combs during cold weather, will be very much disturbed by the mice gnawing at the unoccupied combs.

We like to reduce the entrances of the hives to the space necessary for ventilation only. We believe in sheltering the bees against changes of temperature in all possible ways. It is true that bees can winter, and do winter, with a great deal of ventilation, even with the bottom-board entirely removed, but this is done at the expense of an extra amount of food. A good colony of bees in a healthy condition will keep warm during the coldest weather, but it will require a greater quantity of honey in cold weather, and the colder the atmosphere the more they will consume. That is why bees wintered in the cellar consume so little. It has been estimated by some apiarists that colonies may consume as little as 5 pounds of honey in the cellar during the winter. This is a low estimate, but I am satisfied that 8 or 10 pounds is a fair estimate, while nearly double that amount will be consumed in a cold winter on the summer stand. It is evident that bees produce heat by the consumption of stores.

While we want to shelter the hives against the cold winds and storms of winter, we want to secure them against an excess of moisture by the use of absorbents over the cluster. It has been held by some that upward ventilation is necessary. I doubt this, and believe that the only advantage of upward ventilation is the carrying away of the moisture, which, in a tight-fitting hive, would condense and wet the interior of the hive. But upward ventilation also carries away heat. So we have made it a practice to remove the tight-fitting cloth which is placed over the brood-chamber during the warm season, and replacing it with a straw-mat covered with forest leaves. This does not allow of any loss of heat, but absorbs the moisture as fast as it is produced. This moisture is not often injurious; usually it condenses in the corners and runs down and out of the hive, especially if the hive is tilted forward as all should be.

But I have seen two or three winters in my experience in which the condensation of moisture was so great that it literally soaked the combs, the bottom-board, and all the dead bees that usually fall to the floor of the hive. In this condition the living bees were helpless and soon died, for nothing short of a transfer on dry combs could help them, and such a transfer was impossible in cold weather. But in every case where our bees had upper ventilation, or absorbents in the upper story, the conditions were entirely different, as the moisture had been allowed to pass off as fast as produced. This experience was plain, for we saw the same result in hundreds of hives.

As I said before, this happened only in two or three winters, but the experience with the hives that had a water-tight ceiling was so lamentable that it became an absolute rule with us never to winter bees out-of-doors or in the cellar without giving them either moisture absorbents in the upper story or upper ventilation, the former being very much preferable on account of the economy in heat.

Any sort of covering will do that allows the humidity to pass on through. Langstroth, at one time, recommended corncobs, carefully piled side by side, so as to leave no interstices. Some apiarists recommend cork-dust, which would be all right if not so expensive. A sack full of chaff, or leaves, or wool-waste, cotton, or even carpets, will be far superior to the ordinary tight oil-cloth which serves during the summer.

Outside shelter is good, no matter in what shape, and the material used for this purpose will differ according to the location and ease of securing it. An outer covering or case is the best if it were not for the expense. We have sometimes wintered small colonies in small-sized hives by covering them with a large dry-goods box, which was tipped back during warm days. With such a covering a very small colony or nucleus is often wintered safely, and helped through the spring months without much trouble. But it requires constant attention, as they must be given a flight whenever the weather is suitable.

Above all things, it is well to put our bees in winter quarters before the opening of cold weather, so as not to disturb them after the cold days have begun. Hancock Co., Ill.

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Requeening Colonies—Uniting Weak with Strong

BY EDWIN BEVINS

THERE seems to be an unfortunate or misleading use of words in the heading of that article by W. T. Cary, on page 647. Under the heading, "Uniting Weak Colonies with Strong Ones," Mr. Cary tells how he *requeened* 2 colonies in an old-fashioned way—how he didn't requeen the third one, and how he *did* requeen the fourth one.

Mr. Cary does not say that he used bee-zinc when he tried to requeen the 2 colonies which had their old queens killed, but, supposing that he did, I will venture to say (begging his pardon) that I believe his method of procedure was a great mistake. The work might have been done without any fighting or the loss of a bee.

My way would have been to place those shallow extracting supers having the nuclei and young queens on bottom-boards having the usual ⅜-inch strips to form entrances. Then I should have removed the covers and put two thicknesses of newspaper with small holes over each nucleus, and then set the hives with the queenless bees on top. There would have been no fighting, and there would have been no swarm, unless the work had been delayed so long that queen-cells had come too near maturity.

Now comes the puzzling part of Mr. Cary's experiments. His attempt, it seems, was to requeen a colony having a laying queen with a young queen hatched from a queen-cell in a nucleus placed above the colony to be requeened. It is well known (so queen-rearers say) that a virgin queen reared over a colony will, when released, go below and kill the laying queen. It is evident, however, that Mr. Cary did not intend to requeen in this way. He waited until the young queen was laying, then removed the temporary bottom-board and put in its place two honey-boards. These, it seems, served to protect the young queen and prevent any great disturbance. The rear entrance may have contributed something to this result.

If only requeening was what Mr. Cary had in view, why did he not kill that old queen when the young one came on the stage of action, and then unite by some of the usual methods? If the purpose was to test the efficacy of two honey-boards instead of one, in the preservation of peace between a strong colony of bees with a laying queen below, and a weak colony or nucleus with a laying queen above, then the experiment has some significance. The results obtained by the use of two honey-boards instead of one will be awaited with interest.

When a weak colony in spring is put over a strong one with a view to build up the weak colony by the aid of the warmth and superior numbers of the strong one, it would not be prudent to give a rear entrance to the upper colony, as many bees would seek the old location and be lost.

I am a little curious to know what Mr. Cary would have done with that nucleus if those hybrid rascals had not swarmed. Did he put the two honey-boards between the nucleus and the rascals? Decatur Co., Iowa.

Convention Proceedings

Report of the Missouri Convention

The Missouri State Bee-Keepers' Association met in Sedalia, Aug. 22 and 23, 1905. The convention was called to order by Pres. J. W. Rouse at 2:30 p.m., Aug. 22. Prayer was offered by Dr. Drunert. Roll called and the following members found present: E. T. Abbott, Lewis A. Osborne, M. E. Tribble, J. T. Shackelford, W. T. Cary, J. W. Rouse, R. A. Holekamp, N. R. White, M. E. Darby, W. H. Wilmer, Dr. F. H. Drunert, E. E. Lawrence. W. T. Carrio came later. The following joined during the session: E. G. Guthrie, N. C. Lang, E. B. Gladish.

Secretary Cary and Assistant Secretary Holekamp read their reports, the latter's showing a balance due him of $42.15, which he kindly donated to the Association.

On motion, the secretaries' reports were approved, and a hearty thanks tendered Mr. Holekamp for the noble work he had done, and for his donation to the Association.

Pres. J. W. Rouse gave an address.

At the night session Mr. Holekamp read a paper on foul brood, and a discussion followed in which L. H. Wilmer, Dr. Drunert, E. T. Abbott, and others, participated.

Hon. Geo. B. Ellis, secretary of the Missouri State Board of Agriculture, was introduced to the Association. Mr. Ellis gave a valuable talk on bees and their relation to farming and horticulture, and promised to issue a State bulletin about bees.

SECOND DAY.

The meeting was called to order by Pres. Rouse; prayer by E. T. Abbott.

The election of officers resulted as follows: J. W. Rouse, president; M. E. Darby, vice-president; Robt. A. Holekamp, of St. Louis, secretary; and M. L. Long, treasurer.

Mr. Holekamp read a paper on "How to Transfer Bees from Box-Hives to Movable-Frame Hives." It was listened to with great interest, and a discussion followed in which Messrs. Wilmer, Abbott, and others, took part.

A motion was made to raise $25, or as much thereof as possible, to help pay Mr. Holekamp's expenses to the convention of the National Bee-Keepers' Association in Chicago. Mr. Holekamp refused to receive the donation, saying that he would pay his expenses himself. But he said that a free-will contribution to the funds of the Association would be very acceptable, as the treasury was always empty, and a good deal of good could be done with some extra money, as it could be used for printed matter and postage to bring new members into the Association, and to bring the old members in closer touch with it. Thereupon it was voted that the secretary be instructed to issue a circular calling for free-will contributions to the funds of the Association, to be used at the discretion of the secretary in promoting the welfare of the Association, and enlarging its membership through circularizing and furnishing such literature as would interest the bee-keepers of the State.

E. T. Abbott brought up the advisability of patronizing the Progressive Bee-Keeper, the only paper in Missouri devoted exclusively to bee-keeping. The secretary, on motion, was instructed to write to the editor of the Progressive Bee-Keeper, asking him to co-operate with the bee-keepers of Missouri.

Mr. Abbott offered to print 4000 or 5000 small circulars free of charge to be sent out in the catalogs of bee-supply dealers, to stir up the interest of the bee-keepers of the State in the Association.

The secretary was instructed to prepare such a circular and send it to Mr. Abbott. A vote of thanks was tendered Mr. Abbott for his kindness.

It was voted that every member of the Association be requested to act as a committee of one to form a bee-keepers' club in his own county or vicinity, whose members must become members of the Missouri State Bee-Keepers' Association and of the National Bee-Keepers' Association, thus furthering the interest of the Association and of the bee-keepers of his county or vicinity.

At the afternoon meeting a committee, previously appointed to decide as to when a member becomes delinquent, reported as follows:

We, your committee on interpretation of the constitution in reference to membership, beg leave to report the following:

That record of membership should be made to conform to that of the National Association, beginning the day that the secretary receives the dues, and entitling to all privileges of the Association for one year from that date.

Jas. T. Shackelford,
M. E. Darby.

Mr. Holekamp informed the Association of the organization of The Honey-Producers' League, formed for the purpose of increasing the demand for honey by advertising it in the large journals of the country and otherwise, this advertising to be done in a general way through articles intended to counteract the bad effects of announcements detrimental to the interests of bee-keepers, and calling the attention of the masses to honey as a healthful sweet.

The sympathy of the Association was extended to Pres. Rouse, who had lost his beloved wife since the last meeting.

On motion, the officers of The Ruralist were thanked for kindly allowing the use of their large office-room for the meetings of the Association; also Mr. Osborne, and the people and papers of Sedalia, were thanked for their kindness towards the convention.

The secretary was authorized to use his discretion about having the minutes of the meeting printed.

The convention then adjourned *sine die*.

R. A. Holekamp, *Sec.*

Report of the Chicago-Northwestern Bee-Keepers' Convention, held at Chicago, Ill., Nov. 30 and Dec. 1, 1904

(Continued from page 745.)

MAILING INFECTIOUS MATERIAL.

"Would it not be a violation of the United States postal law to send infectious diseases of any sort through the mail?"

Mr. Reynolds—I would say, as one working in the mails, that it is.

BEE-KEEPING FOR WOMEN.

"Is bee-keeping a pleasant and profitable occupation for woman?"

Pres. York—We have not heard much from the women, it seems to me; I think we had better hear from Mrs. Stow, the vice-president of the Association. Mrs. Stow, what can you answer to that?

Mrs. Stow—Bee-keeping has been very pleasing to me, whether it has been profitable in all respects I don't know, but I don't think I would say that it has not been. I have enjoyed the work with my bees for the last 20 years more than anything else that I have known of, except my own family duties; and the only objection I can see is that there is some hard work about it; that unless she can have the help of a man once in a while, or a big boy, it would be a little too hard for her. But there is so much of the work that can be done by a woman just as well as by a man, that I think it is all right for a woman, if she has the taste to go into the business. I like outdoor work, and enjoy nature and studying it; and it is one of the advantages that any woman going into this business has, as it is done at home, and she can interest her own family in it; it is not like going out to work. But if a woman went into it by herself with the idea of making a living by it, I don't know whether I could say she would be able to do so.

Mrs. Glessner—I am such an amateur bee-keeper that I don't believe anybody that keeps bees would want to hear anything I have to say. Let me tell a story. I have only a very small number of colonies, as I have taken entire charge of them myself. One day when I was busy, and very much engaged—I have a little house down in the White Mountains—I saw a little skunk down the path coming towards me. I was so much engaged I simply went right on with my work, and kept an eye on him. After a while he came down another path, and it was so tempting, he was so close to me, that I thought I would see if I couldn't capture him. So I picked up an empty bee-hive without a bottom-board, but with a cover on it, and I walked out very gently and clapped it over the "gentleman," and then piled some stones on top so that he couldn't lift the cover up; then I went away. My son's house is up in the woods a little way, and I went to the telephone and called him up, and said, "I have a little skunk in a bee-hive down at the bee-yard, and I would be very glad if you would come down and help me." There was quite a little pause, and quite a little snicker, and finally he said, "Of course. What shall I bring?" I said, "You might bring some fire arms of some sort." So I armed myself with a bottle of ether and chloroform, and a little, long syringe. We pushed the cover off a little bit and I threw in the ether and chloroform. Then we tied a long string around the bee-hive and he put me off to one side and said, "Now, when I say 'Pull,' you pull." I pulled, and he fired, and we had one dead skunk, and no odor at all. [Applause.]

Miss Wilson—I don't know that I have anything new to say, except I think it very much depends upon the woman, just the same as it does upon the man. Not all men will make a success of bee-keeping, and not all women. If a woman is intensely interested in bees, and has a good deal of pluck, and grit, and energy, she will make a success of it. If she is afraid of bees and doesn't care for them, and is not interested in them, I don't know that she would be very apt to make a success of it. As to the profit of bee-keeping, I think there are other profits to be considered than dollars and cents. The health of many women would be improved, and they would enjoy a great deal of profit outside of dollars and cents. As for me, I am very sure that the profit in regard to my health would have been a sufficient inducement for me to have gone into bee-keeping; and I think many women would find the same thing, besides materially adding to their finances at the same time.

Pres. York—I think Mrs. Stow said something about having a man to help her. What do you say about that, Miss Wilson?

Miss Wilson—I think it would be very advisable—*if you can get one*. [Laughter.] I think you can get along without them.

Pres. York—Next, I was going to ask Miss Wilson to tell about the man that helps her.

Miss Wilson—If you could all have as good a man to help you as I have to help me, I would advise you all to have a man.

Mr. Wilcox—Can you tell us any reason why a woman producing comb honey cannot make it as profitable as a man can?

Miss Wilson—I don't know of any reason; I say it all depends upon the woman.

Miss Candler—I don't know, only as Miss Wilson says; bee-keeping is very nice, very profitable, and very healthful.

(Continued next week.)

Honey as a Health-Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food", written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey". It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey the more honey they will buy.

Prices, prepaid—Sample copy for a two-cent stamp; 50 copies for 70 cts.; 100 for $1.25: 250 for $2.25; 500 for $4.00; or 1000 for $7.50. Your business card printed *free* at the bottom of the front page on all orders for 100 or more copies. Send all orders to the office of the American Bee Journal.

Some Facts About Honey and Bees.—This is the subject of an article written by Mr. J. E. Johnson, and published on pages 581–82 of the American Bee Journal for Aug. 25, 1904. We have republished it in 4-page leaflet form for general distribution, and furnish it, postpaid, at 35 cents per 100 copies. Send all orders to the office of the American Bee Journal

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses,
By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

Gathering Nectar Long Distances.

Conclusive evidence that a ton of honey was gathered 5 miles away would be well worth our consideration. That which C. M. Tarr gives on page 652, approximates it somewhat, but without being quite what juries require to hang a man by. *Possible* that they got enough buckwheat from the 4-acre field to flavor decidedly nearly a ton of afternoon honey, not buckwheat at all—and not a bee going to the 5-mile fields at all.

Mr. Blunk and His Apiary.

How grand, gloomy, peculiar and solitary Mr. Blunk looks in his apiary! And gentlemen galore in white bosoms look on afar off—to do him sufficient reverence—or to see him get stung.

In marching a whole apiary at once, little by little, *a la* Blunk, I once had occasion to see that the rear rank soon comes to have many more flying bees than the front rank, even with care and slow progress. Pages 657 and 663.

A National Advertising Committee.

A separate fund for advertising, administered by a committee subject to the National Association, seems an excellent plan—provided the scheme that at present has the floor actually needs mending or supplementing. Page 662.

A Point on Deeper Section-Cases.

Excellent! Don't have cases so scant in height that a few sections can by any possibility have to bear the weight of a whole stack above. Crushes things—and crushing, even if limited to a small fraction of an inch, is very bad medicine. Covers and walls should carry the weight. Page 662.

What More the National Association Should Do.

Wrestling with the question, What more shall the Association do? the experts go in. Almost half—13 out of 27—do not advise advertising; 7 out of 27 do advise it; and the other 7 use language that can be construed to favor it. Warfare against adulteration is advised by 12 out of 27. Only 4 come out flat-footed for helping members sell their honey; but 3 more talk in that direction. Although alone in his class, I think McEvoy gives the prize answer—because he advises an inside rather than an outside work, getting bee-keepers to ripen their extracted honey better, and so offer the public a better article. We read something about beginning at the house of God—and surely those who start out to set a wrong world right should take an early opportunity to attack scandalous wrongs among themselves—clear up our own dooryard, and *then* get after other folks. Page 662.

Number of Bees to Store a Pound of Honey.

The motto, "Keep all colonies strong," which Doolittle quotes and queries about on page 663, merely needs to be annotated a little. Very valuable within proper limits. (Put it negatively—never let a colony get below 10,000 if you can help it.) Preserve the difference between "strong" and "extra-strong." There are times when it is rather a waste for a colony to be extra-strong. But also there are times when none but extra-strong colonies will give you any surplus worth mentioning.

Single bee thought capable of bringing in, in the course of its life, an ounce of nectar, and this the equivalent of a third of an ounce of honey. This allows 48 bees to store a pound. I think we have as yet very few such estimates to lay our hands on. If forced to guess, without time to hunt data and figure on them, I should have guessed much less. Don't want to object exactly to the Doolittle estimate, but suggest that it should be considered merely a rare maximum, or theoretical possibility. A 6-pound swarm numbers 26,400 bees. Let's hive them on empty combs and reckon with them 45 days after (when the last of them die). All have their 27 days of field-work in front of them except say one-quarter (6600 bees) which have already worked a-field, some more some less, but the average not so much as 13½ days. So from the 26,400 subtract 3300 to even this up, and we have left 23,100 bees. But the 38th day after hiving, 1000 additional bees go a-field; and they work 8 days before our 45 day period is out. The 39th day 2000 more go; and they work 7 days. So on to the end. These finality additions figure the same as 2370 bee-lifetimes. Add 2370 to 23,100 and our real number to figure on is 25,470. At 48 bees to the pound these bring in 530 pounds. We will allow them to use up 1½ pounds per day for the 45 days (total, 66 pounds), and look to find 464 pounds of honey in the hive. Manifestly this is four times as much as we are to expect in any ordinary circumstances. So, as a standard, it would be more sane to say 200 bees to store a pound—and this desirable standard rather seldom reached.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

"Woman in Industry"

The daily papers tell us that Congress is to be asked to authorize a thorough investigation upon the general subject of "woman in industry," and as the strenuous individual who at present holds with no lax hands the reins of Government, "is said to have been consulted and to have expressed warm sympathy with the project," it is quite possible that something may be doing in that direction.

Now the question is as to just how much that is going to affect us of the bee-keeping sisterhood. Is a congressional committee likely to swoop down upon us any day, or are we to have due notice of its coming in advance, so that we may do some special picking up, and have all trim and tidy in our yards? And will the said committee come provided in advance with bee-veils, or are the sisters expected to furnish them?

We are told that of the 5,320,000 women of 10 years or over engaged in "gainful occupations" in the United States in 1900, 980,025 were credited to agricultural pursuits. Wonder how many of that number were set down as bee-keepers. And how many colonies of bees should be in the care of one of the sisters to take her out of the list of "domestic and personal service" (there were 2,099,165 of that class) and put her in the list of agricultural pursuers? A single colony would hardly justify changing the label on a sister; 100 colonies certainly would; but where is the line?

Perhaps it may be well to wait till those investigators, or inquisitors, or whatever they may be, shall get around.

"Touch Not, Taste Not, Handle Not"

On page 720, Mr. Hasty objects to that sugar-water summer drink with only 2 ounces of honey in it. All right, Mr. Hasty, let's strike out the sugar altogether and substitute 3 pounds of honey instead, and make a better drink of it.

Now as to the really serious objection—the "drunk" in it. Is it really true that there is any more alcohol in it than in any effervescing summer drink? We don't want to go so far as to object to yeast in bread. However, if there is the least danger in that direction, by all means let's have nothing to do with it. Goodness knows, we sisters don't want to advocate anything to help the saloon business.

Summer's Obsequies

The gentian weaves her fringes,
  The maple's loom is red.
My departing blossoms
  Obviate parade.

A brief but patient illness,
  An hour to prepare;
And one beloved this morning,
  Is where the angels are.

It was a short procession—
  The bobolink was there,
An aged bee addressed us,
  And then we knelt in prayer.

We trust that she was willing—
  We ask that she may be.
Summer, sister, seraph,
  Let us go with thee!

In the name of the bee,
  And of the butterfly,
And of the breeze—Amen!

—Emily Dickinson.

Dark Honey for Spring Feeding—Color of Beeswax

I just want to tell Mr. Hasty that he is welcome to regard it as proof that "Great minds run in the same channel"—the fact that two of his "Afterthoughts" came to me also in reading the recent copies of the Bee Journal.

I thought that the matter of having plenty of dark honey for spring use in the brood-chamber might be overdone, though likely it seldom is. For myself, if I found it desirable to feed just before the white honey came freely, I would prefer good sugar syrup, and regard a trace of it in the supers as less objectionable than old, dark honey. Doubtless the advice was meant to cover *earlier feeding* in advance of fruit-bloom. In that case, it is good advice for the *small-hive* men. Those with large hives well filled in the fall would surely have less of that kind of work to do.

The other "thought" I had that jibed with Mr. Hasty's, was anent the color of beeswax. I thought Mr. Dadant's statement that *all new wax is white* a remarkable one. I thought that possibly he meant *undiscolored*, or *clean* instead of *white*, as he was talking of travel-stain in that connection.

With me, the color of freshly-built comb—where there is no admixture of old wax—ranges from the snowy through various shades of cream to what might be termed *straw color* or yellow. I had not thought of the reason for the difference, and am not prepared to accept Mr. Hasty's view of the matter. I set it down simply as an *idiosyncrasy*. It seems to me that is a good deal easier.

My sympathies are with the *man looking for a location*. He wants advice from some one who could give it to him without having at the same time "an ax to grind." If the editor will permit me to say it, I would like to tell him that Nebraska has the requirements he desires. Here in central Custer County our land has been changing hands of late at double the price it brought five years ago. Improved farms bring something like $30 per acre. The price is bound to advance, as land to the east is so much higher. Intrinsically it is no better. We have here a soil that is *unrivalled*, and it is not "drouth-stricken Nebraska." Our rainfall last summer was phenomenal. No, gentlemen, I have no land to sell! (MRS.) A. L. AMOS.

Custer Co., Nebr., Oct. 16.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to DR. C. C. MILLER, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Wintering Bees—Feeding for Winter Stores

1. To winter bees outside which would you prefer, to contract the hive down to as many frames as the bees actually cover, and place a chaff division-board on each side, or leave the full number of combs?

2. Will not those combs keep the bees just as warm as the chaff division-boards would?

3. Last winter I used these division-boards and my bees wintered fairly well; but all of my neighbors did not use them, and their bees came through in fully as nice condition as mine. Does that not indicate that the division-boards caused me unnecessary work and expense?

4 I observed several times, when feeding sugar syrup, that the bees flew from the hives in the morning, and usually a few rods from the hive, and while on the wing squirted out a fine stream of liquid. Now, I explained it in this way: The water which during the night evaporates from the syrup in the combs while condensation is going on, is taken by the bees into their honey-sacs, and in the morning carried out and excreted. Was I right? ILLINOIS.

ANSWERS.—1. To leave the whole number.

2. A French authority made experiments that seemed to prove clearly that they would. It seems hard to believe that there would not be a gain in having division-boards allowing no air to pass around them; but even if there were some gain it is not likely that it would pay for the extra trouble and disturbance of the bees both spring and autumn.

3. It looks that way, provided the winter was severe as usual.

4. I hardly think so. I don't believe the bees ever take up water that has evaporated, unless they are in need of water; but the water they discharged was that which came from the thin syrup they had taken into their honey-sacs.

Sucrose in Honey

I am interested in Prof. Cook's article on page 710. We have a strict law in this State against *any* adulteration of honey, and according to Prof. Cook's argument any of our honey extracted during or soon after a heavy flow would show at least *traces* of sugar. As this would be enough to condemn it, are not all the extracted-honey producers in danger if the State should send out inspectors to analyze samples of honey, which it is liable to do any time? NEW YORK.

ANSWER.—I don't know enough to know all the possibilities in such cases, but I hardly think any trouble is likely to arise. Those who are empowered to see that the law is not violated are not likely to be ignorant of the facts that Prof. Cook gives, and the presence of such proportion of non-inverted material as the bees would leave would not be considered proof of adulteration.

May Be Bee-Paralysis

Last week we had 2 heavy frosts, and since that time one of my colonies has been carrying out dead bees. They began this the first warm day we had after the frost, in the middle of the day. They come out of the hive and crawl around on the ground and act as if they can't use their wings. Do you think it can be bee paralysis? IOWA.

ANSWER.—Yes, it may be paralysis. If it is, you will find the bees more or less shiny, and there will be a trembling motion of the wings. As far north as Iowa you need not feel very anxious about a case of paralysis.

You say in your letter that you found no answer to a question you sent some time ago. I'm a little afraid something went amiss with that letter, for I never knowingly fail to answer any question sent for reply in this department. If at any time any correspondent finds no answer within a reasonable time, it will be a pleasure to have the question repeated; or if any further light on any question is needed, by all means try, try again. I want to help all I can, and will answer just as far as I know; only it is hardly expected that any one will send questions already fully answered in the bee-books. This department is meant to supplement the bee-books as fully as possible.

Darkness in Wintering Bees—Transferring Bees, Etc.

1. Must the bees have darkness in the winter when they are in the house upstairs?

2. What is the difference between Italian bees and the common? Which is the better?

3. Can bees be stopped when fighting? If so, what way is best?

4 What is best to feed bees in winter?

5 I have lost a few colonies of bees in this manner: I bought 4 colonies and lost 2; they had worms in the brood-combs, and the bees were all gone. In some corners there could be seen bee heads, feet, bodies, etc. By this it looks as if the worms ate the bees. I have one colony at which I looked one day to see how they are; they had 8 brood-frames full, in nice and neat order in 11 days. I had not looked in it for 7 days, and found that there were no worker-bees, but all drones and worms. What was the cause?

6. I made a hive from a hollow basswood log 3 feet high and about 22 inches wide, and put in 3 sets of frames, 2 sets for the brood and 1 set for the super. The brood-frames can hold about 70 pounds of honey; the bees filled that, but just stored a little in the super—not even a pound—and swarmed 5 times. It was an early spring swarm. Can I stop the swarming?

7. A neighbor found some bees in the woods in a basswood-tree, and asked me how I could put them into a modern hive. I am only a beginner this year. I have a basswood-tree near my woods in which I know there are bees. Do you think I could transfer them into a modern hive? If so, when?

WISCONSIN.

ANSWERS.—1. If the bees are in a room where they can get out into the room, it should be dark. If a passage-way leads from the hive to the outside, so that no bees can get out into the room, then it doesn't matter whether it is light or dark. Unless the bees have such a passage to the outdoor air, upstairs is not a very good place to winter them.

2. One difference is in color. Italians have three yellow bands. There are differences in disposition, Italians not being so cross, and very much better to keep the bee-moth in subjection. Italians are quite generally considered better than blacks.

3. Bees do not generally fight unless they are fighting robber-bees, or unless bees of 2 colonies in some way get together in the same hive. If they are fighting robbers, they ought to fight, and you can help to end the battle in any way that will stop the robbing, such as closing the entrance down to a small size, so the bees can defend it better. Other things can be done to prevent robbing, but to give them all here would take too much space. Study up the subject in your bee-book, and watch what is said at different times in the bee-papers.

4. Sealed combs of honey of the best quality. Next to that comes sugar syrup fed early, say in August or September.

5 The worms are not the cause of the trouble. If a cow dies, and if you leave the carcass above ground in hot weather, you will find it full of worms, but it isn't the worms that killed the cow. Neither is it the worms that kill the bees. They get in their work when the colony becomes queenless, discouraged, or too weak to defend itself. The cases are not exactly parallel, for the worms do get in some of their work before the colony is dead. Keep your colonies supplied with laying queens, keep them strong, and especially of Italian blood, and you can snap your fingers at the moths.

6. Yes, when the first swarm issues, hive it and set it on the old stand, putting the old hive as closely as you can beside it; then a week later move the old hive to a new place some distance away. That will pretty surely prevent any further swarming.

7. Better not disturb them till they get to work next spring; then transfer them to a movable-frame hive as directed in your bee-book.

Reports and Experiences

The Season of 1905

The past season has been remarkable in this locality for three things. 1st, for excessive and long-continued swarming; 2d, for the fact that the more a strong colony was divided within reasonable limits, the more surplus honey was secured; and 3d, but not least, a most unusual fall flow of honey.

Last fall I put 13 colonies into the cellar. One of these died, but the other 12 came out in fine condition. Some one may say 13 is an unlucky number anyhow. Perhaps it is, but no more so in my case than 14, for I had that number of colonies until somebody stole one in September. I planned to increase the 12 colonies to 30. For this purpose 3 of the best were selected for increase by the nucleus plan, and 4 others for a test of the Alexander plan. One colony was devoted to the production of comb honey; all the others were run for extracted.

The 3 colonies were increased to 15 good strong ones. The 4 Alexander colonies gave me 4 new ones. I had to divide the comb-honey colony on account of excessive swarming, and I hived one natural swarm by itself. This gave me just 30. All these divisions were made early in the season, and about 25 of them gave more or less surplus honey.

The first to swarm were some of the lower stories of the Alexander colonies. Next came the colonies that were not divided. Soon after there came the upper stories (or what had been) of the Alexander colonies. Next the 3 two-frame nucleus colonies formed by taking the queen and 2 frames of brood and bees from the 3 colonies selected for increase by the nucleus plan. Last of all came the 2-frame nuclei formed of 2 frames of brood and bees, each one having reared its own queen.

The first swarm of the season came out June 1, the last Aug. 29, making just 90 days' continuous swarming. About 4 of the nuclei having reared their own queens did not swarm. In the spring all colonies, as soon as they had 6 or 7 frames of brood, were given an extra brood-chamber placed under the first. But no brood was reared in the lower story in a single instance. All colonies made preparations for swarming with the lower story practically empty.

When the honey-flow began, all strong colonies were given 2 supers having a capacity of 40 pounds each. But the bees would swarm just the same with one or two supers. When the weather became fairly warm I raised up each hive from its bottom-board, and put one-inch blocks under the two front corners. The bees clustered in this open space all summer, and the hives were not let down until Sept. 13. When I caged a queen I could push the cage in on the bottom-board in the middle of the cluster of bees.

I do not give any upward ventilation, as it is not a good thing for the bees during the cold nights which we have in this northern country.

In regard to the yield of honey, the colonies not divided gave, in round numbers, 80 pounds each; the colonies treated by the Alexander plan, 115 pounds, and the 3 colonies run on the nucleus plan, 140 pounds each. My banner colony for the season gave me 4 good, strong, new colonies, and the 5 together produced 200 pounds of extracted honey. They also secured an average of 30 pounds each for winter stores. Will some of the experts tell us what was the total amount gathered for the season?

For the first time in many years there was a good fall flow of honey. The last 8 days of August were almost equal to a good basswood flow. Some colonies gained about 30 pounds each during that time. My last honey was extracted Aug. 23 and 24, to avoid getting the fall honey mixed with the early white honey. As it proved, the bees had room for this late flow in their brood-chambers. This last extracting was a mixture of clover, basswood, more or less wild flowers, and a little from goldenrod. It was of a rich, golden color and very choice flavor. To my surprise it began to show signs of granulating the first week in September. By the end of September it was so far advanced that I was obliged to put it in a warm place to prevent it from becoming solid. I have never read or heard of so early granulation.

I put 375 extracting-combs outdoors to be cleaned out by the bees, and fed 100 pounds of sugar in the open air at the same time with no trouble from robber-bees. My 30 colonies are all in first-class condition. F. L. Day.

Becker Co., Minn., Oct. 12.

First Year a Success

This is my first year at the bee-business. I started with 50 colonies, and sold $450 worth of comb honey, besides increasing my number of colonies to 95. Besides, I had a 4 months' fine outing for my wife, daughter, and myself. I attribute it all to the good old American Bee Journal. I have a lovely place for an apiary in the mountains, 15 miles from home. We had a moderately good season.

C. A. Preston.

Orange Co., Calif., Oct. 17.

Apicultural Station in California

The United States Department of Agriculture has now an apicultural experiment Station at Chico, Calif., under the direction of John M. Rankin, of Washington, D.C. They make a special study of different races of bees, bee diseases, and honey-plants.

Mr. Rankin lately made a trip over California; he passed through Tulare County about the middle of September, and visited a number of apiaries. He shows great interest in the business, and makes a very favorable impression.

I believe this experiment station will be of great benefit for the bee-keepers of California—one of the largest honey-producing States of the Union. The bee-keepers are very glad that the Government has finally done something for them.

What we really need in this country are certain kinds of trees, such as shade-trees which produce honey between fruit-bloom and the time alfalfa yields, which is between April 1 and July 1. I believe that certain kinds of eucalyptus will be valuable in this respect. It certainly will take a number of years to show results, and it is of great importance that the Government has taken up this kind of work, which the bee-keepers could not undertake on account of the expense. Otto Luedorff.

Tulare Co., Calif.

Bee-Keeping in Washington

I came from Indiana to this place a year ago this month. I have had no experience with bees, but I surely think this is going to be a grand place for them. I got 3 colonies in the spring, 2 of which swarmed twice each; the other didn't swarm at all, and from it I have taken 218 pounds of nice honey.

W. S. Haxton.

Benton Co., Wash., Oct. 5.

CONVENTION NOTICES.

Illinois.—The 15th annual meeting of the Illinois State Bee-Keepers' Association will be held in Springfield, on Tuesday and Wednesday, Nov. 21 and 22, 1905, in the room of the Board of Supervisors in the Court House. The R. R. Rates will be as follows: All lines in the Western Passenger Association will make an open rate of one fare plus 25 cents for the round trip to Springfield, except from near points where a fare and one-third would be less. All lines in the Central Passenger Association will make a similar rate on the Certificate plan, and if not convenient for any attending our meeting to come over the lines in the Western Association, if they will write me I will send them certificates which the Grand Secretary of the I.O.O.F. assures me your local secretary of the same order will gladly sign. The Central Passenger Association Lines are as follows: B. & O. S.-W.R.R.; Big Four Route; C.& E.I. R.R.; C.H.&D.R'y; I.,I & I.R.R.; J.& St.L. R'y; L.E. & W. R. R.; L. & N, R. R.; Southern R'y (St. Louis Div.;) T., P. & W. R'y; T., St. L. & W. R R.; Vandalia Line; Wabash R. R., east of Tolono.

The good results of this annual bee-meeting rest on the members who attend it. Our State gives us an appropriation to publish our report and to suppress foul brood, and it is the duty of every bee-keeper of the State to have a voice in the manner in which this appropriation is used. All bee-keepers are invited to come, and bring their wives. The railroad rates will not be higher than an open rate of one fare and a third for the round trip, and efforts are being made by our Odd Fellow friends to secure a one fare for the round trip. Good hotel accommodations can always be had at reasonable rates. Jas. A. Stone, Sec.

Route 4, Springfield, Ill.

The Chicago-Northwestern Bee-Keepers' Association will hold a social session at the Revere House, Dec. 5, 1905, at 10 a.m. At 2 p.m. the same day will be held the regular annual election of officers. Any other business coming before the meeting will be attended to. All who are accustomed to paying their dues to our Association, thereby getting two memberships for the price of one, will please hand the $1 to the secretary, or mail it to him as usual. The time in the evening will be given to the National, as will also the whole of the two following days. Everyone is cordially invited to be present, both at the short sessions of the Chicago-Northwestern, and at the 7-session meeting of the National Association.

Herman F. Moore, Sec.

Park Ridge, Ill.

N. B.—Any one paying their dues to the National Association *direct*, will have to pay another dollar to the Chicago-Northwestern, if it is desired to become a member of the latter organization also. Hand your dues to H. F. Moore, the Secretary. H. F. M.

The National Bee-Keepers' Association holds its annual convention at the Revere House, corner of Clark and Michigan streets, in Chicago, during the Fat Stock Show, when exceedingly low rates may be secured on the railroads. The dates for the meeting are Dec. 5, 6 and 7. Rates at the hotel are 75 cents for a room alone, or 50 cents each, where two occupy the same room. Meals are extra, or they may be secured at near-by restaurants.

W. Z. Hutchinson, *Sec.*

A Farmer Says

Some good words about our Booklet on Farm Telephones.

"Sweet Valley, Pa., Aug. 15, 1905.
Stromberg-Carlson Tel. Mfg. Co.,

Gentlemen:—Your booklet reached me safely. You have many valuable and timely suggestions, and I only hope that it may find its way into every locality that does not have the advantage of telephone service. THERE IS NO ONE THING AT THIS TIME DOING MORE TO BRING THE FARMER ON AN EQUAL FOOTING IN BUSINESS, EDUCATION AND CULTURE, WITH HIS URBAN BROTHER, THAN THE TELEPHONE.

As we have two well constructed, thoroughly equipped, successfully operated telephone lines in this locality, one known as the Lake and Lehman Telephone Co. and the other The Farmers Telephone and Supply Co., I can do no more than to wish you success. Sincerely yours,
A. E. Lewis."

What Mr. Lewis says about the value of the telephone in the Farm Home is seconded by all farmers after they have once enjoyed the privilege of telephone service.

We have several booklets which will tell you how to get a telephone line started in your community and how to buy telephones and construction materials to the best advantage. Ask for our booklet 80-B, "How the Telephone Helps the Farmer." We will send you a copy by return mail.

STROMBERG-CARLSON TEL. MFG. CO.
Rochester, N. Y. Chicago, Ill.

Mention Bee Journal when writing.

12.80 For 200 Egg INCUBATOR
Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day
GEO. H. STAHL, Quincy, Ill.

44A26t Please mention the Bee Journal.

350 Colonies of Bees

in fine shape, in 3 apiaries, all of which are well equipped with houses and fixtures; also $1000 worth of fixtures. Address,
R. J. McMURREY, Cold Springs, Tex.

Mention Bee Journal when writing.

"GET A DANDY"
the fastest cutting bone cutter made, and double your egg yield. Sold direct on 30 days trial. $5 up. Catalogue free.
Stratton Mfg. Co., Box 21 Erie, Pa.
Mention Bee Journal when writing.

Please mention Bee Journal when writing advertisers.

Mondeng Automatic
Honey-Box Machine

Capacity, 7,500 per hour.

(The above cut shows the machine operated by one man.)

Self-feed Gang Circular Saws, and Double Drum Sanders that polish both sides at once.

☞ No manufacturer can afford to be without these machines.

Full line of Section Machinery for sale. Write for circulars and prices. Address

CHAS. MONDENG, Patentee,
160 Newton Avenue, North, - MINNEAPOLIS, MINN.
40Ctf **Mention Bee Journal when writing.**

Money in Peeps.—Many successful enterprises have sprung from the most humble beginnings for, "Mighty oaks from little acorns grow," is a proverb that fits the poultry business better than any other industry. The raising of chickens can be started in a small way and the flock gradually increased till one has just as many birds as he can handle.

To quickly and successfully accomplish this the hen nowadays is used only for egg-production—an incubator hatches the "peeps." One of the most modern and at the same time most successful chicken hatchers is the Wooden Hen. It is made by George H. Stahl, of Quincy, Ill., the well-known maker of incubators and brooders. The catalog which this firm issues is one of the most instructive books on poultry-raising which has been issued in recent years. It is quite elaborate, containing many plates in natural colors, including views showing the development of the chick from the egg to the bird. They mail this book free to all inquirers. Mention the American Bee Journal when writing.

A Great Offer!

Beginning with Jan. 1 we will discontinue sending THE MODERN FARMER to any one the moment his subscription expires, and, in order to get as many new subscribers to this, the cleanest and best farm monthly published on this continent, and to introduce it into new communities, we will send a TRIAL subscription, one year to NEW subscribers only, for 15 cents in silver. The paper will stop when your time expires, and will not be furnished any one whose name is on our list now, at this price. This offer will only hold good for a SHORT TIME. Send now before it is withdrawn. Sample copies free to you and any of your friends whose names you may send Address.

THE MODERN FARMER,
307 N. 3d Street, ST. JOSEPH, MO.

Bargain in Bee-Supplies

On account of removing from the city, I wish to sell at once the list of bee-supplies given below. Will sell the lot at less than one-half the present retail prices as shown by Root's catalog. They certainly are a big bargain.

7—8-frame hive-stands
2—8-frame wood-zinc boards
2—Danzenbaker Hive-covers
3—Reversible hive-bottoms
9—10-frame dovetailed supers
5—10 frame dovetailed winter cases
4—8-frame dovetailed supers
9—8-frame dovetailed extracting-supers
22—10-frame dovetailed hives
3—8-frame dovetailed hives
75—M fences
1—Danzenbaker bottom and detachable alighting-board
10—8-frame hive covers
16—Hoffman top-bars
800—4x5x1⅜ sections (new)
7—Miller feeders
2—8-frame bee-escape boards
25—8-frame hives (new)
25—8-frame 2P supers (new)
500 plain sections (new)

$40 will take the lot if ordered at once.

For further particulars, address, MISS M. A. CALDWELL, Morton Park, Ill.
Mention Bee Journal when writing.

Seed-Time and Harvest

is an illustrated Monthly Journal for country homes. It is known everywhere as the Great "Home Industry" Monthly. It is a "Periodical with a Purpose." Its mission is "Teach Independence Through Home Employment." Only 25 cents per year; none free.

Seed-Time & Harvest Pub. Co.
Dept. 208, Scranton, Pa.
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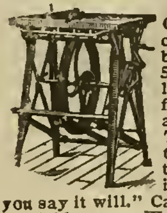
Made of artificial stone. Practically indestructible, and giving entirely satisfactory results. Comb foundation made easily and quickly at less than half the cost of buying from the dealers. Price of Press, $1.50—cash with order. Address,

ADRIAN GETAZ,
36Ctf KNOXVILLE, TENN.

☞ J. G. Goodner, of this State, writes me that he "prefers to pay $25 for a Rietsche Press than do without it."—A. G.



BARNES' FOOT POWER MACHINERY

Read what J. I. Parent, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

Address, W. F. & John Barnes,
995 Ruby St., Rockford, Ill.
Mention Bee Journal when writing.

A New Magazine

Would you like the new magazine—written especially for you—to you—by you, good stories, pretty, serviceable fashions, household helps, recipes, letters from subscribers, practical plans for earning incomes—a charming magazine—worth many times its price? If so, send us 25 cents for a year's subscription, or send postal for sample copy.

The WOMAN'S JOURNAL
702 Journal Bldg. CHICAGO

PETS

If you are interested in Pigeons, Rabbits, Cavies, Dogs, Cats, Birds or Pets of any kind, you should send for a **free sample** of **PET STOCK. It's the Best Publication of its kind in America.** Has a national circulation, and it's only 50c a year. Address, **PET STOCK.**
40Ctf Box 20, YORK, PA.
Mention Bee Journal when writing.

BEEF BREEDS
— FOR MONEY —

Dr. Walter J. Quick, Indianapolis, Ind., will consider the history, profits and value of beef-producing cattle in November

Blooded Stock

that bright, active stock paper. Learn how to feed, breed, fatten and market. Subscribe! Spend 25c for a year. You can afford it. Do it now and learn how to make more money.

Blooded Stock, Box 221, Oxford, Pa.

"It is continuous advertising that impresses the public with the stability of a firm."

Best Goods in the World

Best Bee-Hives, Sections, Comb Foundation, and everything the bee-keeper needs. Now is the time to buy for next season's use. **Lewis' Goods at factory prices.** Catalog free. Cash orders at catalog prices on such goods as mentioned in special list.

Before November	9 percent discount	Before February	6 percent discount
" December	8 " "	" March	5 " "
" January	7 " "	" April	3 " "

Ask for special list now, free.

Honey-Packages for Marketing Honey

Such as Shipping-Cases, Tin Cans, Buckets. **Glass Jars with patent spring sealers and glass stoppers;** regular Glass Fruit-Jars, etc. Sample cases for sending samples of extracted honey by mail. Special prices on Glass Honey-Jars and Tin Buckets.

New Crop Extracted Honey

We have an abundance of the finest honey in the world. Can ship in cans and barrels. If you can't supply the demand in your locality write to us at once and tell us how much you can use; 10 cents for sample by mail, but we return the 10 cents with your first order.

Paint for Houses, Barns and Roofs

We can furnish any quantity of any grade of paint on short notice. Special prices on absolutely pure paint. Let us quote on paint for your house.

Write to-day and tell us what you want in our line, and how much. **Best service, lowest freight rates, satisfaction to all.**

C. M. SCOTT & CO. 1004 EAST WASH. STREET
INDIANAPOLIS, IND.

Mention Bee Journal when writing.

Glass Jars for Honey

We can ship by **return freight** at the following prices:

½-lb. Jars with corks—1 case of 21 doz. for $5.50; 3 cases, $15.50.

¾-lb. Tiptop Jars—1 case of 14 doz., for $5.25; 3 cases for $15.

1-lb. Tiptop Jars—1 case of 12 doz., for $5; 3 cases for $14.

Second Hand... Comb Foundation Mill

We have for sale a 6-inch Second-Hand Comb Foundation Mill. Used scarcely any; good as new. If interested write for price.

YORK HONEY AND BEE SUPPLY CO.
(Not incorporated)
141 Ontario Street, - CHICAGO, ILL.

If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published, send $1.20 to

Prof. A. J. Cook, Claremont, Cal.,
—FOR HIS—
"Bee-Keeper's Guide."
Liberal Discounts to the Trade.

For Sale—25,000 Lbs. of well-ripened

Spanish-needle Extracted Honey put up in new 60-lb. tin cans—6c a pound for the lot, or 6½c for less, **F. J. GUNZEL, Weiner, Ark.**

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WE SELL ROOT'S GOODS IN MICHIGAN

Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. **Beeswax Wanted for Cash.**

M. H. HUNT & SON,
BELL BRANCH, WAYNE CO., MICH

Mention Bee Journal when writing.

Big Discounts on Bee-Supplies

The following discounts apply on all orders except honey-packages for current use:

For cash orders before Oct. 1—10 percent

Nov. 1	9 percent	Feb. 1	6 percent
Dec. 1	8 "	March 1	4 "
Jan. 1	7 "	April 1	2 "

We handle **LEWIS' GOODS**, and carry a large stock, which insures prompt shipment. Catalog free. Address,

LOUIS HANSSEN'S SONS,
213 & 215 W. 2d Street, DAVENPORT, IOWA

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Wisconsin Basswood Sections

And Prompt Shipments

Is what we are making for our customers.

— DOVETAILED HIVES AND SHIPPING-CASES —

We carry a full line of SUPPLIES. Ask for Catalog.

THE MARSHFIELD MANUFACTURING CO., Marshfield, Wis.

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8 Percent Discount

We will allow you the above Discount on all Orders accompanied by Cash during November. Send for our Catalog.

PAGE & LYON MFG. CO., New London, Wis.

FOR SALE HONEY-JARS

The No. 25 Honey-Jar, Porcelain Cover, Metal Screw Cap, absolutely tight, holding One Pound of Honey, Net, in shipping-cases of one gross each:

1 gross lots .... $4.50 per gross
5 " " .... 4.00 "

Also in strong **RE-SHIPPING CASES** of two dozen each, heavy corrugated partitions, sides, top and bottom—a perfect protection—

1 case lots .... $1.00 per case
5 " .... .95 "
10 " .... .90 "

Eight ounce Tumblers, tin caps, 3 dozen in reshipping case:

5 case lots, per case, 3 doz 85c
10 " " " 80c
20 " " " 75c

F.O.B. New York. Prompt shipment on receipt of order.

HILDRETH & SEGELKEN,
265 & 267 GREENWICH ST., NEW YORK, N. Y.

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4 Largest Sizes Soot Burning

Never Go Out And last from 5 to 21 years

BINGHAM
Original
Direct Draft
CLEAN
Bee Smokers

Pat'd 1878, '82, '92 & 1903.

Tin 4-in. Smoke Engine 3½-inch 8-inch 2½-inch 2-inch Wonder
$1.50. $1.10. $1.00. 90c. 65c—per mail.

Sent on receipt of price per mail.

T. F. BINGHAM Farwell, Mich.

OTISVILLE, PA., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. FRED FODNER.

PURE BASSWOOD HONEY

IN 60-POUND CANS

We have a good supply of **Pure Basswood Honey** in 60-lb. cans that we can ship by return freight at these prices: 2 cans, boxed, at 9 cents a pound; 4 or more cans, at one time, 8½ cents a pound—all f.o.b. Chicago. Cash with order. Sample, by mail, 8 in stamps, to cover package and postage.

Address,

YORK HONEY AND BEE SUPPLY CO.
141-143 Ontario St., CHICAGO, ILL.

WANTED

Fancy White Comb Honey in Non-Drip Shipping-Cases; also White Clover Honey in cans and barrels. Please send samples and state your lowest price, delivered here. We pay spot cash upon receipt of goods.

GRIGGS BROTHERS
521 Monroe Street. - TOLEDO, OHIO.

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HONEY AND BEESWAX

When consigning, buying or selling, consult

R. A. BURNETT & CO.,
199 SOUTH WATER ST. CHICAGO, ILL.

Lowest Prices

Big Discount for Early Orders

On Cash Orders

Before November 1..................9 percent
" December 1..................8 "
" January 1..................7 "
" February 1..................6 "
" March 1..................4 "
" April 1..................2 "

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OF ALL KINDS

Established Nearly 25 Years

We have published THE AMERICAN BEE-KEEPER for 15 years (monthly. 50c a year.) The largest and best illustrated magazine of its kind for the price published. Edited by two of the most experienced bee-keepers in America.

Sample copy free.

Our large, illustrated Price-List of Supplies free on application. Address,

The W. T. Falconer Mfg. Co.
JAMESTOWN, N. Y.

Mention Bee Journal when writing.

Headquarters for Bee-Supplies

ROOT'S GOODS

At Root's Factory Prices

Complete stock for 1905 now on hand.
Freight rates from Cincinnati are the lowest,

ESPECIALLY FOR THE SOUTH, AS ALL FREIGHT NOW GOES THROUGH CINCINNATI.

8 Percent Discount

For Cash Orders Received in

NOVEMBER

This applies to all goods with exception of Shipping-Cases and other Honey-Packages for current use.

C. H. W. WEBER CINCINNATI ...OHIO...

Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

Honey and Beeswax

Chicago, Oct. 5.—The demand for comb honey is about as usual for the season of year. Offerings from the surrounding States are fully equal to the past season, but that from Colorado and the Middle Western States are not. No. 1 to fancy white comb honey sells at 13@14c, with an occasional sale at 15c; the off grades embracing crooked combs, etc., sell at 11@12c; amber grades difficult to place at 9@10c. Extracted, white, 6@7c, according to kind, body and flavor and package; ambers 5½@6½ cents. Beeswax selling upon arrival at 30c if clean; off grades about 2c per pound less.

R. A. Burnett & Co.

Cincinnati, Oct. 6.—Reports from different parts of the country give evidence of an almost total failure in the comb honey crop, excepting the points in the North. We are selling this Northern comb honey at from 14@16 cents per pound, by the case. The demand for extracted honey is about equal to the receipts, which are good. We continue to sell amber in barrels at 5¼@6c; white clover at 6½@7½c. For beeswax we are paying 30c per pound, cash, delivered here.

(We wish to call the attention of the producer to the above honey quotations, who mistakably expects to receive these prices for his product. The above are our selling prices.)

The Fred W. Muth Co.

Indianapolis, Oct. 12.—There is a good demand for strictly fancy white comb honey, demand and supply running about even. Demand for lower grades of comb honey not good. Numerous shipments of honey arriving, but no one producer seems to have very great quantities to offer. I quote fancy white at 15@16c; No. 1 in poor demand at 12c, and amber dull at 10c. Best grade extracted brings 8@9c in 60-lb. cans; amber slow at 5c. Beeswax, 28@30c.

Walter S. Pouder.

Albany, N. Y., Oct. 23.—Honey demand is better this week The weather is cooler and more inclination from grocers to stock up. We quote: Fancy white comb, 15c; No. 1, 14c; No. 2, 13c; mixed, 12@13c; buckwheat, No. 1, 12@13c; No. 2, 11@12c. Extracted, white, 7c; mixed, 6½c; buckwheat, 6½c. Beeswax, 29@32c.

H. R. Wright.

Philadelphia, Oct. 19.—Honey has been arriving freely in the last 10 days. There are still some small producers who have a few hundred pounds, and want to dispose of it quickly and get their money, who are keeping the prices down. We quote: Fancy white, 14@16c; No. 1, 13@14c; amber, 10@11c. Extracted honey rules firm at 5½@6½c for amber; 6½@7½c for white. Beeswax firm, 28c.

We are producers of honey and do not handle on commission. Wm. A. Selser.

Kansas City, Oct. 9.—The honey-market here at present is very strong at $3 25 per case for No 1 and fancy white comb in 24-section cases; amber and other grades selling for less according to quality. Extracted in good demand at 6½c. Beeswax, 28c.

C. C. Clemons & Co.

Toledo, Oct. 17—The honey market remains firm, with good demand, and prices the same as last quotations. Fancy white comb brings 15c; No. 1, 14c; fancy amber, 13c; buckwheat, 13c. Extracted, white clover, in barrels, 6¼@6½c; amber, in barrels, 5@5¼c; in cans, 1c to 1½c higher. Beeswax in good demand, 26c cash, 28c trade. Griggs Bros.

Cincinnati, O., Oct. 24.—The nice weather holds back the demand for comb honey. Crops seem to be exceedingly short and producers in the West keep the price high. We quote fancy water-white comb honey No. 1 white clover from 14@16c; No. 2 from 12½@14c. Extracted seems to be more plentiful. In barrels, light amber, 5¼@5½c; in cans, ½c more. White clover from 7@8c. Beeswax, 28@30c.

C. H. W. Weber.

New York, Oct. 20.—Comb honey is now arriving very freely and the demand is good for nearly all grades. We quote fancy white at 13@14c; No. 1, 11@12c; amber, 10@11c, and buckwheat, 10c. Extracted in good demand. Arrivals of California are large while from other sources receipts are very light. We quote California at from 5½@7c per pound, according to quality and quantity; Southern in barrels and half-barrels, at 55@60c per gallon. Beeswax firm and scarce at 29@30c.

Hildreth & Segelken

San Francisco, Oct. 18.—White comb, 1-lb, sections, 8@9cents; amber, 6@7c. Extracted-water-white, 5@—c; white, 4½@4¾c; light amber, 3¾@4 cents; amber, 3@3½c; dark amber, 2½@3c. Beeswax, good to choice, light, 25@27c.

The honey market continues featureless, except for the obvious disinclination of apiarists to sell at the ruling quotations and the inability of the dealers at the present writing to offer more. Five cents per pound for extracted honey seems to be as high a figure as dealers are able to contract for, and even at this figure they are extremely reluctant to buy. Comb honey brings 9c, strictly choice basis, and the transactions at that figure are very limited. Lately, however, there are rumors that growers are beginning to let go of some of their holdings at the figures mentioned.

WANTED

FANCY COMB HONEY IN NO-DRIP SHIPPING CASES, ALSO EXTRACTED HONEY. IF YOU HAVE ANY TO OFFER, QUOTE US YOUR ROCK BOTTOM CASH PRICE DELIVERED HERE, AND MAIL US A SMALL SAMPLE OF THE EXTRACTED HONEY. WE BUY EVERY TIME THE PRICE IS RIGHT, AND REMIT PROMPTLY.

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We believe it would pay those having it in car lots or otherwise to write us. Give us your lowest spot cash prices, and fully describe the goods and style of package; when you can ship, etc. We handle more of these goods than any other firm in the U.S. Yours for business,

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Until further notice, finest quality new crop California Water-White White Sage and Light Amber HONEY in 60-lb. tins, 2 in a case; new cans and new cases Write for prices and samples, and state quantity you want.

HILDRETH & SEGELKEN
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34Atf Please mention the Bee Journal.

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If so, be sure to make your headquarters

AT OUR CHICAGO AGENCY, YORK HONEY & BEE-SUPPLY CO.,

141 and 143 Ontario Street,
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Where you will be cordially welcomed, and where all information can be obtained regarding Convention and city.

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* * *

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AMERICAN BEE JOURNAL

OUR TOIL DOTH SWEETEN OTHERS

WEEKLY—$1.00 A YEAR

Published by GEORGE W. YORK & CO., 334 Dearborn Street

MASSACHUSETTS AGRICULTURAL COLLEGE

45th Year CHICAGO, ILL., NOVEMBER 9, 1905 No. 45

APIARY OF E. E. CRAVEN, OF ROSEAU CO., MINN.
(See page 774)

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY
GEORGE W. YORK & COMPANY
334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec05" on your label shows that it is paid to the end of December.

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Objects of the Association

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00

General Manager and Treasurer—
N. E. FRANCE, Platteville, Wis.

☞ If more convenient, Dues may be sent to the publishers of the American Bee Journal.

The Honey-Producers' League

(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

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1. Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.
2. Any honey-dealer, bee-supply dealer, bee-supply manufacturer, bee-paper publisher, or any other firm or individual, may become a member on the annual payment of a fee of $10, increased by one-fifth of one (1) percent of his or its capital used in the allied interests of bee-keeping.

GEORGE W. YORK, Manager,
334 Dearborn St., CHICAGO, ILL.

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To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us ONE NEW subscription with $1.00 for the Bee Journal a year. Now is the time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.

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If you want a catalog that is more than a price-list—that contains valuable information on bee-keeping—you must hurry to have your name placed on our mailing-list. Only a limited number will be printed. It's free, of course.

JOHN DOLL & SON,
Power Building, - - MINNEAPOLIS, MINN.

H. M. ARND, Mgr.

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COME AND INSPECT
LEWIS' BEE-WARE
AND MAKE YOUR HEADQUARTERS AT
YORK HONEY AND BEE SUPPLY CO. (Not Inc.)
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Beeswax Wanted at all Times.

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☞ J.G. Goodner, of this State, writes me that he "prefers to pay $25 for a Rietsche Press than do without it."—A. G.

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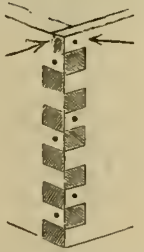

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corner that we have told you about, and as you will see it can't warp nor split off as it passes by and nails firm to the side. Prices right—quality right—workmanship right.

Our discount discounts everything. Postal gets a circular.

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LICE SAP LIFE

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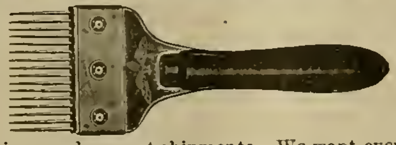

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I. H. Myers, Lamar, Colo.
Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex.

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Now is the Time to send in your order for goods for use next season, and for all orders where cash accompanies we allow the following discounts:

Before October 1	deduct	10	percent
" November 1	"	9	"
" December 1	"	8	"
" January 1	"	7	"
" February 1	"	6	"
" March 1	"	4	"
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Freight-Rates from Toledo are the lowest. Can take Honey and Beeswax in exchange for Supplies if you desire. Send for free illustrated Catalog. It describes and illustrates everything for both the Poultry and Bee Keepers.

GRIGGS BROS,
521 Monroe Street,
TOLEDO, - OHIO.

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Why not get a New Subscriber for the American Bee Journal, to send with your own renewal?

A GOOD INVESTMENT

16⅔ Percent Interest. Abso utely Safe. A Chance for Bee-Keepers Only.

Read again what Editor York says regarding it on page 661, Sept. 21, American Bee Journal.

Discounts for Early Cash Orders

For cash orders before	Nov. 1	9 percent	For cash orders before	Feb. 1	6 percent
" "	Dec. 1	8 "	" "	Mar. 1	4 "
" "	Jan. 1	7 "	" "	Apr. 1	2 "

The above are the discounts which we offer for early cash orders.

You will notice that after January, the discount drops 2 percent a month; and if we find that advancing prices of materials do not warrant the larger discount, we reserve the right to reduce the amount.

Orders may be sent to any Branch House or Dealer

Well-known Dealers The dealers, whose names follow, are well known to bee-keepers. They have been, for the most part, long established in the bee-supply trade, and have a knowledge of the business most valuable indeed to the bee-keeping fraternity. Their advice may be had on any question of Supplies, etc., for the asking.

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Shipping Points You will observe that these dealers have excellent shipping facilities—guaranteeing you quick delivery and low freight rates.

Prices, Discounts The prices, terms, discounts, etc., are identical with the home office at Medina (with rare exceptions). Full particulars may be had before ordering, if desired, by writing the dealer nearest you. You can, however, use our Medina catalog and terms, and, if any variation, your dealer will advise yeu, if requested, before shipping.

Other Dealers Besides the following list, there are many others who handle some of Root's Goods. The following is by no means complete for hundreds of dealers come to us for many of the gooda of which we are the exclusive manufacturers. *Insist on getting Root's Goods.*

Local Dealers In addition to the following list who carry large stocks, and furnish at both *wholesale and retail*, we have in every State a large number of local dealers who handle our goods exclusively. As there are over 500 of these dealers, space will not permit giving their names at this time; but infoamation will be given by us, on request, to any bee-keeper regarding the dealer nearest him handling Root's Goods.

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E. Grainger & Co., Toronto, Ont.

COLORADO
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The L. A. Watkins Mdse. Co., Denver, Colo.

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Vickery Bros., Evansville, Ind.

IOWA
Joseph Nysewander, Des Moines, Iowa

ILLINOIS
The A. I. Root Co., 144 E. Erie Street, Chicago, Ill.

KANSAS
Carl F. Buck, Augusta, Butler Co., Kans.

MISSISSIPPI
George A. Hummer, Brazelia, Miss.

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F. H. Farmer, 182 Friend St., Boston, Mass.
W. W. Cary & Son, Lyonsville, Mass.

MAINE
The A. I. Root Co., Mechanic Falls, Me.

MARYLAND
Rawlings Implement Co., Baltimore, Md.

MICHIGAN
M. H. Hunt & Son, Bell Branch, Mich.
George E. Hilton, Fremont, Mich.

MINNESOTA
The A. I. Root Co., 1024 Mississippi Street, St. Paul, Minn.

MISSOURI
John Nebel & Son, High Hill, Mo.
Springfield Seed Co., Springfield, Mo.
Blanke & Hauk, St. Louis, Mo.

NEW MEXICO
Edward Scoggin, Carlsbad.

NEW YORK
The A. I. Root Co., Syracuse, N. Y.
The A. I. Root Co., 44 Vesey St., New York City, N Y.

OHIO
McAdams Seed Co.,Columbus Grove,O.
Griggs Bros., 521 Monroe St , Toledo,O.
C. H. W. Weber, 2146 Central Avenue, Cincinnati, O.

PENNSYLVANIA
Prothero & Arnold, Dubois, Pa.
The A. I. Root Co., 10 Vine Street, Philadelphia, Pa.

TEXAS
Texas Seed & Floral Co., Dallas, Tex.
Udo Toepperwein, San Antonio, Tex.

VIRGINIA
W. E. Tribbett, Spottswood, Va.

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J. M. Jenkins, Wetumpka, Ala.

OREGON
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TEXAS
D. M. Edwards, Uvalde, Texas.

CALIFORNIA
California National Honey Producers' Association, Los Angeles.
Madary Planing Mill, Fresno, Calif.

THE A. I. ROOT CO., Medina, Ohio.

ESTABLISHED IN 1861

THE AMERICAN BEE JOURNAL

OLDEST BEE-PAPER IN AMERICA

(Entered at the Post-Office at Chicago as Second-Class Mail-Matter)

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor | CHICAGO, ILL., NOVEMBER 9, 1905 | Vol. XLV—No. 45

THE AMERICAN BEE JOURNAL is absolutely an independent publication, and not connected with any bee-supply business whatsoever. It stands entirely upon its merits as an educative force in the field of bee-keeping, and as a medium for legitimate advertisers in apicultural or other lines. It is the oldest, and only weekly, journal of its kind in America. Its publishers believe that it deserves to be in the hands of every would-be progressive successful bee-keeper in the land. It is in its 45th year, and to-day is acknowledged to be better in every way than at any time during its long and honorable history.

Editorial Notes and Comments

Chicago-Northwestern Convention

Just after the forms of last week's American Bee Journal were closed, we learned that the managers of the annual Chicago Fat Stock Show, previously announced for Dec. 2 to 9, was postponed for two weeks, or Dec. 16 to 23, on account of delay in getting structural steel for the new amphitheater building.

On account of this, the Chicago-Northwestern Bee-Keepers' convention will be held on Tuesday, Dec. 19, at 10 a.m. and 2 p.m.

We *suppose* the National convention will also be postponed for two weeks, which would make it Dec. 19, 20 and 21, as the low railroad rates will not be in force during the first week in December, but will be from Dec. 16 to 23. By another week doubtless something definite can be announced concerning the National.

◆

Improving the Stock of Bees

Much has already been said in these columns about breeding from the best, so as to improve the stock, but so long as not 1 bee-keeper in 10, if indeed 1 in 50, practices anything in that line, no excuse need be made for frequent reference to the subject. This time is given the practice of an Australian bee-keeper, Chas. U. T. Burke, who says in the Australasian Bee-Keeper:

"When I got rid of the undesirable races I started to work to get equal workers and honey-gatherers in each hive. The first good season one colony would give a yield of say 200 pounds of honey for the season; another a yield of 150 pounds; another 100 pounds; and yet another only 50 pounds of honey for the season, so that something was evidently wrong, considering that all colonies were equalized and had a fair start at the commencement of the season. I reared queens from the 200-pound yield, and cut off the heads of queens from colonies yielding 50 and 100 pounds of honey, and replaced them with young queens from the high yielders. Next year a similar thing occurred, though the number of low yielders was not so great; among them being some of the high yielders of the year before. I still kept on breeding queens from the high yielders to replace the low yielders, until after 8 years of such experience I have a fairly good average lot of yielders, with only an exceptional one now and again being a low yielder, which at once dies."

◆

Wax-Worms for Fish-Bait

Drone-larvæ have been commended as bait: but now comes Arthur Goldsborough, in Gleanings in Bee Culture, and says that the larvæ of the bee-moth is away ahead—"so tough that they can not be nibbled off, and one larva will catch several fish." Easy to start a hatchery for wax-worms, but they require rather expensive food.

◆

Prevention of Swarming

More and more it is becoming customary, especially among bee-keepers who have out-apiaries, to follow some plan of management that shall, so far as possible, dispense with the annoyance of swarming. So it is always interesting to learn the management of those who are successful, even if there be nothing particularly original in that management. Here is the plan of one of the veterans, J. E. Crane, as given in the Bee-Keepers' Review:

"Open every populous hive, and, if preparing to swarm, either remove the queen and cut all the queen-cells having larvæ more than three or four days old; or, if the queen has been previously removed, cut out all queen-cells, and, later, give all such a virgin queen. The queen removed, if vigorous, can, with a comb of brood and a few bees, be made the nucleus of a new colony. Instead of treating *all* colonies in this way, I prefer to shake the strongest colonies upon empty combs (if I have them) or full sheets of foundation, using the combs of brood for building up weaker colonies, or any nuclei that have been started."

A point upon which light is needed is as to that word "later." Mr. Crane says, "Cut out all queen-cells, and, later, give all such a virgin queen." One's understanding as to *how much* later might make all the difference between success and failure.

It would be interesting to know, also, whether a swarm ever issues with the virgin queen given.

◆

Nominations for the National

On page 694 is given the list of names sent in by postal card to General Manager France as the names of those whom the different members desired to be considered as candidates for the respective offices, 3 to 12 names being attached to each office. The Bee-Keepers' Review publishes the list, and then says:

"And now I hope that Bro. France will bear with me if I make a few criticisms. Two years ago the Directors voted that the General Manager should call for a postal-card vote, and 'the two men receiving the greatest number of votes for each respective office are to be candidates for said office; the names of the nominees and the offices for which they are nominated to be published in the bee-journals.'

"What I object to is the publishing of the names of more than two of the candidates, and of indicating which man has received the greatest number of votes. Almost the sole object of this informal ballot is that we may, if we so desire, occasionally elect a new man to office. We wish to place before the members two candidates with equal chances for election, or as nearly equal as it is possible for us to make them. The man already in office has an advantage, but by dividing up the opposition vote among half-a-dozen others he is almost sure of election.

"Another thing: Don't tell who has the greatest number of votes. Say that John Doe and Richard Doe have received the greatest number of votes. If you say that John Doe had the greatest number, and Richard Doe the next greatest number, that practically elects John Doe, and that is the very thing that we wish to avoid.

"As I have already said, we wish to bring two candidates before the voters with as nearly equal chance of election as it is possible. If we give the names of half-a-dozen candidates, and tell which one received the

> greatest number of votes, we have practically destroyed the value of the informal ballot, and might just as well hold our elections without any nominations.
>
> "As it is, the very object that the Directors had in view is defeated by the manner in which the results of the ballot are published."

That the General Manager has gone beyond the letter of his instructions there can be no question. But are not the Directors also to blame for upholding him in such action? For he did precisely the same thing a year earlier, and they have at least winked at his action by keeping silence, for it is hardly to be supposed that he would have done the same thing again if any vigorous objection had been made by them.

But did the Board of Directors actually contemplate such action as the Review desires? Evidently the Review reads into the ruling something more than is to be found there, making it read that the two men receiving the greatest number of votes are to be candidates. But the rule does not say they are to be "the only" candidates; not even that they are to be "the" candidates; only that they "are to be candidates."

Grant, however, that it was the intention to make them the only candidates—for there is no denying that specially naming as candidates the two receiving the greatest number of votes looks no little in the direction of making them the only ones — would the course desired by the Review be a wise one?

The Review is speaking close to the mark when it says: "Almost the sole object of this informal ballot is that we may, if we so desire, occasionally elect a new man to office." Perhaps not exactly that, either. A man is not especially desirable simply because he is new. Other things being equal, a new man is not so good as one having had previous experience in the same office. But for years it had been the custom to vote for the same set of men over and over again, just because there was no chance to find out what any one else thought as to fit names for the place. Some of the officers themselves felt that the existing state of things was not desirable—not to say that they thought it intolerable. The ground for the difficulty was that there was no meeting face to face of the members, no chance to compare notes, no chance to know what others thought, no suggestion of any new name, and when the time came to send ballots by mail the old members were re-elected year after year. The idea of the preliminary nomination by postal card was to get away from this as far as possible, and to get as near as possible to a meeting in person where all names are announced as well as the number of votes received by each. What would be thought if, at any meeting of a deliberative body, an informal ballot should be taken, and the entire proceeding should be kept secret except the announcement that Smith and Jones received more votes than any other, but no member should know which got the higher number of votes? If that were the right policy, then it should be carried just one step further, and only have the name announced of the one receiving the most votes.

The Review says, "If we give the names of half a dozen candidates, and tell which one received the greatest number of votes, we have practically destroyed the value of the informal ballot." Did the Review ever know of an informal ballot being taken where those voting met in person without that very thing being done to which it objects? If the Review is right, then the value of the informal ballot is always practically destroyed. On further thought, however, it will probably modify its views on that point.

Instead of keeping things in the dark, let there be still more light, and let not only all names be given, but the number of votes for each.

◆

Failure Good for Beginners

J. A. Green very sensibly remarks in Gleanings in Bee Culture:

> "It is sometimes a real misfortune for a man to have two or three good seasons at his start in bee-keeping. He is building on a false foundation. It takes several years to find out what an average is in bee-keeping. When disaster comes, as it is sure to sooner or later in the shape of a poor season, he is not as well prepared to meet it as if his earlier experiences had been less flattering."

Miscellaneous News Items

Julia Ida Mondeng, daughter of Mr. and Mrs. Charles Mondeng, of Minneapolis, was married to Ernest W. Langdon, on Oct. 30. Our heartiest congratulations are hereby extended to Mr. and Mrs. Langdon.

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The Illinois State Convention of bee-keepers will be held in the Board of Supervisors' room in the Court House in Springfield, Ill., Tuesday and Wednesday, Nov. 21 and 22. It is hoped that there may be a large attendance of Illinois bee-keepers. Reduced rates have been arranged for on the railroads. See notice on another page for further particulars.

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Chicago-Northwestern Convention.—As will be seen by Secretary Moore's notice on another page, there will be a meeting of the Chicago-Northwestern Bee-Keepers' Association on Tuesday, Dec. 19, at the Revere House, where the last two or three meetings have been held. The forenoon session at 10 o'clock will partake of a social nature, and the afternoon session, at 2 o'clock, will be mainly for business.

It is hoped that there may be a large attendance to welcome those who come to be at the National convention, which will likely meet in the evening of the same day (Dec. 19).

All who desire to have their dollar pay a year's membership in both the Chicago-Northwestern and the National Association, will need to mail it in advance to the Secretary-Treasurer of the former Association, Mr. H. F. Moore, Park Ridge, Ill., or hand it to him during the sessions of the conventions. One dollar paid to Mr. France will simply pay a year's membership in the National, and not in any other association also. But a dollar paid to Mr. Moore will pay the annual dues in both.

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The Apiary of E. E. Craven is shown on the first page. He wrote us that the trees are apple, plum and cherry. He uses Simplicity hives exclusively, and says they somewhat resemble Jacob's coat.

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Mr. Orel L. Hershiser, of Erie Co., N. Y., writing us Oct. 27, reported as follows:

> "I have had a fairly good honey season. My honey crop amounts to over 16,000 pounds. Bees are in fine condition for winter. I will winter upwards of 300 colonies. I am getting good prices for honey."

As Mr. Hershiser is a lawyer, he mixes law and bee-keeping, and the result thereof seems to be all right.

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Mr. Chas. M. Darrow, Route 1, Milo, Mo., while away from home on Sunday, Oct. 22, lost by fire nearly everything he had except a team, wagon and harness, bees, one cow, and two stacks of hay; with insurance of about half the value. Mr. Darrow is a queen-breeder, and had calls for a large number of his queens during the past season. We understand he has on hand several hundred requests for prices on queens for 1906. Any others desiring his queen price-list can write for it. More queen patronage will help him out on his fire loss.

◆

Prof. A. J. Cook, as most of our readers know, sailed for Europe last August. Last week we received the following letter from him, dated Oct. 24:

> Dear Mr. York:—We are charmingly located, like Paul, in our own hired house—only we are here in grand, old Berlin. It is good to be in such a great university town, and I am big with regrets that it had not been my fortune years ago.
>
> We are at Heilbronner Strasse 30, Berlin, Germany, and shall be here till April 1, 1906, after which we shall see south Germany, Austria, Italy, Switzerland, and the Fiords of Scandinavia. Please say this editorially, if you will be so kind. My friends wish to know my whereabouts.
>
> We are in the finest part of Berlin, but, oh! it is not America. Every day we say, Give us America. Ever yours truly,
>
> A. J. Cook.

Prof. Cook will continue to write regularly for the American Bee Journal. We have an article from him on the European honey markets and prices, which we will publish in December.

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Jos. M. Martin, a 150 colony bee-keeper located in St. Joseph Co., Ind., called on us last week. He had 69 colonies last spring, and increased mainly by dividing. His honey crop was about 600 pounds of extracted and a fair amount of comb honey.

Mr. Martin usually at this season of the year gets bees from neighbors who would sulphur them anyway for their honey. He simply shakes them out of the boxes (in which they are) on combs of honey in modern hives. He is quite successful in wintering such transferred bees. Possibly many of our readers could get bees in that way if they have the extra hives and combs of honey necessary. Surely, any man would prefer to give the bees away rather than sulphur them, as he would still have the honey left, and would also be saved the trouble of sulphuring the bees.

Contributed Special Articles

Meeting Bee-Keepers at Fairs, Etc.—A Solution of the Question of High-Priced Bee-Supplies

BY F. GREINER

TO meet the people who are engaged in the same business we are, affords, to say the least, considerable pleasure, and the bee-keeper who does not from time to time mingle with his brother bee-keepers misses a great deal, I dare say, although in turn he often has to suffer great inconveniences and hardships, for the great majority of men have queer ideas of their rights and liberties, *i. e.*, they disregard entirely the rights and comforts of their fellow men, the women and the children. Selfishness reigns supreme. This is sad but true. I am unfortunately sensitive or susceptible to tobacco, and always suffer untold misery when I come in contact with smokers and chewers.

There were gathered about the honey exhibit at the New York State Fair a large circle of prominent honey-producers, and the topics of the day were discussed. I failed to find one who had joined The Honey-Producers' League. All seemed to be rather shy of this new organization of honey-producers, *with the honey-producers left out!*

High prices of bee-keepers' supplies was the universal lamentation. One of the most extensive bee-keepers said: "It is claimed that *I* don't kick on high prices, which is true; but the fact is, I never bought but one bee-hive of the manufacturers, which fact, however, is not mentioned."

Another experienced old bee-keeper incidentally said: "Manufacturers have gotten in a way of making bee-hives so complicated that ordinary mortals with no elaborate machinery can make them."

Here are two points which I wish to emphasize. In the first place, if prices are really so high as to give an unduly large profit to the manufacturer, why not follow the example of our first-mentioned friend? Why buy? I am not sure that our bee-supply manufacturers are making too large profit. I never bought but 10 bee-hives and outsides for 100 supers, and those I considered I bought reasonably. Generally I make my own hives; this I have practiced for 30 years, and shall continue it, although lumber is now up to $20 per 1000 feet

I have of late been pricing gasoline engines, and find that it would require the cash outlay of about $100 to rig up for bee-hive making. I doubt if I myself am any more of a mechanic than the average bee-keeper, but I would say that I can get up as good and serviceable a hive as any regular bee-supply manufacturer, using a much more inferior outfit, with the exception of the circular saw, than even the $100 rigging mentioned above.

But—and now I am coming to the other point: My hives are not of that complicated nature that the *modern* hives are as sent out by the big factories. Let us review the history of hive-making.

When Langstroth made his first hive, all hive-parts were cut off square. This answered the purpose. The frames were made as simple as they could well be made. The length of top-bar required it to be made heavy, which again required its being rabbeted at the ends. This rabbeting gave us, as an incidental advantage, great rigidity of the frame, and constituted about the only difficulty in hive-making. All other work was cutting off square and nailing, and some rip-sawing, of course. Soon, however, hive-making was greatly improved. The boards had to be mitered. With the help of an iron frame the 4 boards were held in shape till nailed. And not to forget, I must mention the beautiful but undesirable bevel at top and bottom of the hives. It was a marvel to me, how it was possible to cut them so perfect that one would fit on the other; also the tops, etc. I began to think that I might as well give up the struggle of hive-making, but for some unaccountable reason—perhaps obstinacy—I continued in my bungling way.

It was another complicated piece of business to get up a chaff-hive of the older pattern, one requiring mechanical skill to put it up. I refrained from following suit, and made my own in a simple fashion. They are good to-day.

The dovetailed hive, Danzenbaker, etc., came last, and the Hoffman-frame. I allowed my better judgment to run away with that "desire" to be up to-date with the rest, and the best, and so purchased 10 up-to-date hives with Hoffman-frames, and 20 up-to date fence supers with plain sections. This I have regretted ever since, although I believe I bought them cheap. I greatly prefer the loose-hanging frame to any other, be it closed-end or Hoffman. I have little use for fence separators—plain separators suit me better. I would not even to-day use plain sections, but use the bee-ways. I can handle the plain just as well as the other, and I can save a little in shipping-cases, etc., but the retailer spoils many a box of the plain ones when he wouldn't spoil any of the bee-ways.

In summing up I would say: If the (poor?) honey-producer does not wish to enrich the (rich?) manufacturer, why does he not go to work and make his own bee-hives? About the only thing we will regularly have to buy of the manufacturer are the sections, if we are comb-honey producers, and I doubt if he would become rich very fast at that business even at the present high prices.

Some bee-keepers use large quantities of comb foundation. If I needed it very badly, and did not want to pay the present high prices, I would make that myself. I find I can make a good article for the brood-chamber. This is all that is needed. It would be better if section comb foundation had never been made. By its use very inferior comb honey is now produced. I have produced tons of comb honey without it, not even using it for starters, and can do so again, although it has been a convenience to have it to use as starters.

Ontario Co., N. Y.

* * *

Black Bees—A Down-Trodden Race

BY ALLEN LATHAM

ONE can scarcely read through a single copy of the American Bee Journal without some slurring remark concerning the black bee. From all sides one hears this race derided and all other races lifted far above it; even our good Dr. Miller is forever telling his questioners to get Italian bees if they wish to get rid of the wax-moth. Yet there is black blood in Dr. Miller's own bees.

I will not take the reader's time to explain the various reasons for all this opposition to the black bee, but merely say that it is a more or less unfounded prejudice. I doubt greatly whether any one can demonstrate that the black bee is inferior to the Italian in keeping out the moth. Any race will keep out the moth when any colony is in normally good condition, and any race will give way to the moth when there is trouble with the queen, or when starvation is coming in at the entrance.

When, during the early part of this summer, I was greatly troubled with pickled brood, and noticed that the disease was especially bad with the black colonies and showing almost none at all with the straight Italians, I was obliged to acknowledge that here at last was a point at which the Italians surpassed the blacks. Later, however, when I observed that the Italians failed to come up to normal strength, though breeding heavily, while the blacks seemed to hold their strength remarkably well, I tried to get up a defense for my protege, the black bee. I concluded that all colonies were affected with the disease, but, whereas the black bees died in the larval stage, the Italian workers died soon after leaving the cells. The only gain was in the combs of the Italians being kept free from diseased brood. Many hybrid colonies had their bees die in the pupa state, and thousands of the white workers were carried from the hives.

The disease has gone, and my faith in the black bee is coming back in all its strength, for which reason I desire now to point out still further its superiority to the Italian as a bee of profit when bred with equal care.

It must have struck every thinking bee-keeper as a strange thing that Italian colonies so quickly run back to the black condition It seems to matter little how few the scattering colonies of blacks there are about the country, and how large the apiaries of yellow bees are, sooner or later they will all be black or dark hybrids unless constant effort is made to prevent this. I observed only the past summer that, though my home apiary is largely headed by Italian queens, and though I keep many more bees than any one near here, only a third at best of my yellow queens mated with other than black drones.

How shall we account for this strange fact, if it is acknowledged to be a fact? How does this inferior black bee with its predisposition to yield to disease, its inability to cope with its enemy, the moth; its weak honey-getting power, and its general, all-around worthlessness—how does this black bee, I repeat, manage to run out of existence its yellow cousin whose splendid attributes are printed on the advertising sheets of every journal devoted to apiculture? The question is a difficult one, and one which I should have been inclined to give up had I not stumbled upon a possible answer the past season.

It has been my purpose for some time to save this black bee from contamination with other races, if possible, and seek to give it a chance through careful breeding to prove its qualities. During the past summer I have been rearing queens from an old black queen of unusual excellence.

The task has been very up-hill labor. I have reared 30 or more queens with great care, and now have only a few mated queens to show for my labor. Out of the last dozen which emerged most promisingly, more than half failed to mate or were crippled on their return by being balled. Many were killed outright. Yellow queens at the same time were mated with no difficulty.

To account for this thing was a puzzle till I happened to see one of the black queens fly. She went like a bullet. Surely it would take a swift drone to catch her! One of the queens was gone nearly, if not quite, half an hour, yet returned unmated. This was during the last week of September, and only a few drones were still alive. The yellow queens, however, mated in spite of the scarcity of drones.

There seems to be but one answer. The flight of black bees is stronger than that of Italians. The drones found it easy to overtake the yellow queens, but were mostly distanced by the black queens.

Here we have an explanation for the frequent mismates which we encounter when trying to rear Italian queens. In the wedding-race the black drones distance the yellow drones, and, unless the yellow drones happen by chance to be better situated in the race, the accepted suitor is black. This will explain why eventually, if left to themselves, black bees will run yellow ones out of existence.

I fully expect that little credence will be given this theory which I have just advanced, especially since the prejudice against the black is so firmly rooted; but I feel confident that what I have advanced can not fail to arouse the interest of every thinking bee-keeper. Even if the reader does cry "Bosh!" he will be set to thinking, and thinking is what makes of us better bee-keepers.

New London Co., Conn.

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Wax-Rendering Methods and Equipment

BY ARTHUR C. MILLER

ONE of the difficult things for most of us is to get a new point of view for a subject, to approach it from a different side. This seems to be noticeably the case in regard to apicultural matters, due partly to the old superstitions which still cling about it, and partly to the literature on the subject. These thoughts are suggested by some recent comments in the bee-press on current practices, particularly some regarding the extraction of wax.

Wax-presses have received much attention of late, all sorts of home-made affairs being illustrated and written about. They are exploited as being the proper thing for securing *all* the wax from old combs, this claim being made by one firm for the presses they make. Any one with half an eye knows that such results are impossible with any wax press now made. It is only necessary to examine the refuse from a wax-press to be assured of the fact that much wax remains in it. And the greater the mass of material put in a press the greater the proportion of wax retained. This principle of wax-extraction is wrong, and no amount of "clawing over" of the slumgum will remedy the evil.

Not long since there appeared in these columns an article by Mr. Dadant, describing a French contrivance for recovering wax, consisting of a double-ended paddle rotating below a strainer. The kettle, or pail, was to be filled with water and comb, the paddle and strainer adjusted, and as the paddle stirred the mass below the strainer, the freed wax rose to the surface. Aside from a brief adverse comment by Mr. Hasty, no notice appears to have been taken of it, *and yet within that little contrivance lie the true principles for the extraction of wax.* To be sure, the machine is incomplete and crude, but, properly developed, it is to be the wax-extractor of the future.

Old comb consists of various sorts of fiber and other substances of an absorbent nature, and as soon as the mass reaches the melting point of wax these substances take it up. To get it out, the mass is squeezed; but until you can squeeze a sponge *dry*, do not expect to *press* all the wax from a mass of old comb. When melted under water the absorbent substances take up much of it, affording better opportunity for more wax to be secured; but even the mass must be agitated in order to permit the wax to escape, and to make the operation complete some device must be used to break up every particle of the comb.

Besides these features, some device must be had for skimming off the wax as it rises, so that when all is extracted the refuse may be immediately removed and the machine recharged.

A machine properly constructed embodying these features will secure all the wax, and do it rapidly and easily.

Providence Co., R. I.

Convention Proceedings

Report of the Texas Convention

BY LOUIS H. SCHOLL, SEC.

The 5th annual meeting of the Texas Bee-Keepers' Association was held at College Station, July 25, 26 and 27, 1905.

The meeting was opened at 9 a.m., July 25, by President W. H. Laws, with a few words welcoming the bee-keepers present.

Louis H. Scholl, the secretary-treasurer, was instructed to take down the proceedings, as a stenographer was not obtained in time.

Prayer was offered by Mr. J. M. Hagood.

Mr. W. H. Laws then delivered the following

PRESIDENT'S ANNUAL ADDRESS

We have met for the purpose of obtaining knowledge of our beloved pursuit, and to disseminate the same among our bee-keeping friends. These annual gatherings are looked to, as they should be, with expectations and delight, where we can again meet, clasp hands, and greet each other as friends—fraternal greetings—men of one pursuit, whose business interests should be mutual and identical. I trust that you are here with a full program, and that every one of you will feel that the success of the meeting will depend upon you—it is yours.

In the first place, we should express our thanks to the various lines of railroads who have so kindly donated passes, making it possible for so many of us living at remote distances in this great State, to be present at this meeting. These railroad companies are awakening to the fact that apiculture in all its branches and the interests of the railroads are identical; that when the farmer and the bee-keeper prosper they likewise prosper; and in order that we bee-keepers, and men of other agricultural pursuits who have met here and are on the grounds by the thousand, representing what is known as the Farmers' Congress, they have issued thousands of passes. They depend upon us to return home and to disseminate to the good of our neighbors the information that we have gained, believing it will result in better methods and increased production, and consequently increased business for their lines.

There are some things in which we bee-keepers of Texas are interested, and to which I would like to direct your attention. We are proud of the very effective and needed legislation on the diseases of bees; and now that an appropriation has been made by our last Legislature to aid in the eradication of these diseases, whenever they should occur, any and all bee-keepers in the State who should know of the existence of the disease, should at once communicate with the inspector of apiaries, who will either appear in person or render the assistance necessary for the eradication of the disease. So far as known there is little if any foul brood in the State, and all precautions are used against its introduction. But when known to exist, the most heroic measures should be used for its eradication.

We are now much in need of a pure honey law. The Bill which met defeat at the hands of the last Legislature, we take, was a good one and for the benefit of all, producer and consumer alike. It should have become a law. The scarcity of honey the present season only opened the door more widely for the vendor of adulterated goods. Indeed, it is so widely known that adulterated honey is so commonly found on the market of the large towns and cities of the State that the more intelligent people hesitate to purchase unless the assurance is given that pure honey is furnished from a reputable producer.

I do not believe in the existence of trusts to the enriching of the few at the expense of the many, but there should be such organization among honey-producers that we should not come in competition with ourselves. To this end a honey-producers' association should exist and be maintained, and our products handled by economic business methods.

I would call your attention to The Honey-Producers' League, an institution less than a year old, national in character, and it has already begun its work of merit. Any bee-keeper of the United States or Canada may become a member. Let us investigate its merits.

We realize the need of a bee paper edited in the South. Several attempts have been made to meet this want, but unsuccessfully, or a journal would be in existence to-day. The management of our bees in the South being entirely different from the management in Northern latitudes, the reasons and the calls for a Southern bee-paper are many, and we will hail with delight the advent of a journal backed up by an individual or stock company that will have the backbone to come to stay. With such a journal, conducted by a clean, progressive bee-man, and a stock company to perpetuate a live journal with sufficient financial backing, the bee-keepers and advertisers will rally to its support.

Owing to the almost prohibitive prices now being fixed on hives by the large manufacturers, there is a crying demand for factories in our midst that will make use of our native pine and cypress for hive-making. The low prices on honey, and the several successive poor seasons, make it imperative that supplies must be bought more cheaply.

The honey industry of Texas, we might say, is in its infancy, yet this great State produces more honey than any other one State in the Union. Are we a progressive body? or shall we wait until our day is past and others will catch the spirit of progress and do the things that we should now begin?

Lastly, I repeat that the success of this meeting depends upon you. It is yours. Let us enter heartily into all the discussions.

W. H. Laws.

(Continued next week.)

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Report of the Chicago-Northwestern Bee-Keepers' Convention, held at Chicago, Ill., Nov. 30 and Dec. 1, 1904

(Continued from page 761.)

PRESSURE OF THE GERMAN WAX-PRESS.

"Will Mr. Root tell us what is the pressure of the German wax-press?"

Mr. Root—I don't believe that I can answer that in pounds. Miss Wilson said a good deal depends upon the woman in keeping bees. A good lead depends on the wax you are pressing, and a good deal depends on what strength you have. One great trouble is, it is a mistake to suppose that a great deal of pressure is necessary; an intermittent pressure is generally better than to squeeze the combs right down. Suppose you fill your press clean up to the top, and then squeeze it down in a solid mass, and consider you have done the job. That is not the way it should be done. It should be squeezed, and turned over, and turned over, and squeezed, if you want to get it all out. Some experiments are going to show that hot water is a great deal better than steam.

Mr. France—Just one thing there. I believe that some of you get a wrong impression about the wax-press. When Mr. Root said, "You fill that up," he won't recommend that, or I have not found that from my experience. You want to put in but a small quantity of slumgum at a time in order to get the effect of the pressure.

Mr. Wilcox—How thick should the cake be at the bottom of the press when you press it?

Mr. France—I should prefer not to have it over an inch and a half thick.

Mr. Reynolds—Dr. Miller, I believe, asked Mr. Hubert Root last year what the pressure was of that press, and he stated that there was between three and four tons. I claim that there is no such pressure, for the simple reason that the cross-piece of the wax-press will not stand it. The one I use bends, and draws the side in on the basket, and it is a hard matter to get the basket out with the slumgum in.

Dr. Miller—Is the bar of wood or metal?

Mr. Reynolds—It is wood. I think it is not right that that should be sent broadcast through the proceedings of the convention as it was last year.

Mr. Meredith—I believe if you take a 10-pound block, and put it over the screw, turning or pressing the wax, that the pressure at which I have used the press, the slumgum would easily raise a 10-pound block. I don't think there are many people who recognize the force that is obtained by the screw process. Possibly Mr. Root could give us some idea. You have seen buildings that have been raised with jacks, and the thread on the wax-press is something like that, which would indicate a large amount of pressure.

Mr. Wheeler—I have used one of those presses and I have had to do away with one of those top sticks. As Mr. Reynolds said, it was too light, and kept bending, and bending, until it was a regular rainbow, and finally we had to put in twice as heavy a stick of oak, 3 by 4 inches, and that works tip-top. The hot steam seems to soften the wood. The first one gave out entirely. After it got a bent shape I turned it over.

Mr. Root—What Mr. Wheeler says is true. We found that out to our sorrow, and I will say we have replaced those, and any one who has had one that has given them trouble, we desire to give him a new one. We put an iron brace under it, and a piece of sheet-metal to protect the wood. I perhaps ought not to say it, but I will say it, that wax-press is something we sent out and we thought it was perfect. There is a great deal to learn about a wax-press. My brother has been three months working on this wax-press, ten hours a day, doing nothing else, and sometimes clear up into the evening, and we have learned this, that great pressure is not necessary. During the last year we changed the pitch of the screw so that it would have less than half the power of the first screw sent out, because the difficulty would be, they would put too great pressure on and break it. Mr. France is right when he says a press should not be full, only enough to make a cheese about an inch and a half thick. Then you can get all out but about five percent of the wax. What we are working for now is to get that five percent.

Mr. Dadant—We have had considerable experience in melting beeswax and old combs. We used to melt old combs by breaking them up fine, soaking them in water, and then rendering them. But the great principle is, if you get the combs well broken, those combs that contain cocoons or the skins of the larvæ lodge in the cells, and no matter what amount of pressure they will not come out; that is, they will not allow the wax to come out. If you have everything well broken, and well soaked in water, the beeswax will come out sooner or later.

Dr. Miller—That is very good, I believe, but I failed on that.

Mr. Dadant—I never did much of it myself, but I know we did it.

Dr. Miller—I am merely saying I didn't know enough to do it, and I would like to know how.

Mr. Dadant—If you do it in warm weather it will not do it so well, but in cold weather it will do it better. We have used the German wax-press, and I believe we are one of the few who have not broken the iron casting given in the first place. We had customers who bought those through us and who all complained of breaking them. We took it for granted that it was easily broken, and we must be careful, and I think we got the wax out of the combs about as well as anybody could. We put the wax in and put on the pressure, and keep it on all day long. You will find every few minutes, or half an hour or so, you can make another turn with but a little pressure, and keep on getting your wax away from the center. We have the same thing in pressing grapes. You take a large cheese of grape-pulps and press it in a hurry, and the juice in the center has no time to get out; but give it time to press out, as the pressure goes on it it gives more room; you press it gradually, and therefore you can get better results with less fatigue to the operator.

Dr. Miller—Do I understand that the metal casting had broken?

Mr. Root—The first press we sent out had a cast iron frame built exactly as they build them in Germany. I supposed if we followed the plan given in Germany we would be perfectly safe. Those who have had experience in making castings will know that sometimes there are flaws in the casting. Mr. Dadant may have had one without any flaws. Those flaws are covered up by galvanizing. We replaced all that we knew about, and sent out the wooden tops.

I sent Dr. Miller one. Then we discovered that the combination of metal and wood—wood protected by a piece of galvanized iron—was better than anything else we could have, and that is what we are now furnishing. It consists of a piece of hard oak, 4 by 3 inches thick; on the inner side of it is a cast-iron brace that is two inches at the widest part, through which the screw passes, and an inch at the farthest point. This brace is made just like ordinary braces—with a rib running through the center to stiffen it. The cast-iron top was a circular piece of cast-iron about three-eighths of an inch thick, with ribs like the spokes of a wheel, the ribs being thicker towards the center.

Mr. Meredith—I would like to say a word, not speaking of pressure as a defect, but from experience possibly in putting on too much power when I have had to let it stand. The bottom or the portion upon which the cage sets being a light piece of metal with rivets around, I have drawn two or three rivets right straight through, and I found that the iron around there has turned something like the fans of a windmill, instead of standing up. I was wondering if that was a common complaint, or just an accident with my machine.

Mr. Root—That is not a common complaint, but in some few instances it has happened. There is one thing about the wax-press I feel chagrined over—that we couldn't build it in the first place so that it would resist these strains. But you can see what the problem was to us, it was making one strain against another, and that strain sufficient to stand all kinds of pressure. When we say the pressure must be right, it may be three or four tons, or four or five tons, they don't quite understand what we mean. In reference to the remark made by Mr. Reynolds, stating that my brother said the pressure would be three or four tons, he probably gave that statement from first experiments then made. At that time we thought great pressure was necessary, but we learned afterwards pressure was not needed, but a light pressure continued, so that the wax could get away.

Mr. Reynolds—Don't you think it should be sent broadcast to the people that that was a mistake?

Mr. Root—This is broadcast here.

Mr. Reynolds—Shouldn't it be put in Gleanings?

Mr. Root—I think I have published it two or three times.

(Continued next week.)

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Painting Hives—Feeding Bees—Transferring—Other Subjects

1. What color do you paint your hives?

2 Do you number them? When you put them out in the spring do you put each one on its old stand?

3. Do you put a brick under each leg of the hive and slant it towards the front, and level each hive in the spring with a spirit-level so it will not tip sidewise?

4. Which is best for feeding, granulated sugar dissolved in water or boiled to a syrup of the consistency of honey?

5. Do you ever feed any kind of meal to your bees?

6. Do you make honey-vinegar? If not too much trouble please give me your process.

7. How do you prepare bees for wintering? and where do you winter them, in a bee-house, outdoors, or in a cellar?

8 What time of the day is the best to take off comb honey, or combs for extracting?

9 How can I transfer bees from an old and undesirable hive to a better one?

10 I bought a 60-pound can of extracted alfalfa honey that tasted just like catnip. Is that its natural flavor? It was not like the sample sent me.

11. Do you wear a bee veil and gloves? If so, what kind?

12. Do you label each section of honey?

13. Do you water your bees? If so, how?

14 Do you salt the water?

15. What is the largest number of pounds of honey you have ever taken from a single colony in one season—comb and extracted?

Reader.

1. They are not painted.

2. Each hive is numbered, and when it is convenient each hive is put on its old stand, but for different reasons this does not always happen. For instance, a colony from the out-apiary may have made such a good record the past year that we may want to keep it in the home apiary for the sake of its drones, as most of our queens are reared in the home apiary.

3. Bricks are excellent, but it is more convenient for us to use blocks of wood to level the stands. Our stand is a very simple affair, each one accommodating two hives. A spirit-level is used to level it from side to side, and it is slanted toward the front.

4. Boiling does not change sugar; it has been thoroughly boiled; and it doesn't matter whether it is dissolved with or without heat. But the bees take it better when hot.

5. Some springs we do, and some we don't. The bees will not take anything of the kind when they can get pollen.

6. Working for comb honey, we have no cappings from which to make vinegar.

7. They are not prepared, further than to see that they have plenty of stores. They go into the cellar just as they were on the summer stands.

8. The time when bees are busiest at work.

9. That depends; if the frames are all right in the old hive, there is nothing to do but to lift them out of the old hive into the new. If the bees are in a box-hive, you can transfer as directed in the bee-books, although nowadays the tendency is to let the bees swarm and empty the old hive 21 days after swarming

10. Alfalfa honey ought not to taste like catnip.

11. Yes; the veil is an open bag with one end sewed to the hat, and the gloves are hogskin, when I can get that kind.

12. No.

13. Generally by means of a large crock with sticks of fire-wood in it.

14. Generally not.

15. 300 sections, or a little more than 275 pounds.

* * *

What One Woman Does

In that excellent monthly—Suburban Life—appears an article from a bee-keeper already pleasantly known to the bee-keeping sisters—Miss Frances E. Wheeler. It appears that her pursuits upon her $4\frac{1}{4}$ acres of ground are more diversified than most of us had probably imagined. She not only keeps ducks and bees, but distributes her busy cares among chickens, turkeys, currants, squabs, and dear knows what else.

Obliged to give up her work as stenographer, like many another in her position, Miss Wheeler looked with longing eyes upon a life outdoors amid the growing things of the animal and vegetable world. Could she break away entirely from office-life and risk the chance of making a living among the ducks and bees? But the struggle is best given in her own words:

"It is a simple matter for the rich to respond to the 'Call of the Wild,' but a quite different thing for people of comparatively restricted means, or pinched pocket-books, to find the open sesame to a summer, or life, with Nature. And yet it is not so very difficult. For even the pinched pocket-book, there are many ways in which the change might be accomplished.

"If one felt sufficiently brave and determined, one might even venture alone to make a living on a little country place, as did the writer.

"I have never learned to swim, but I fancy that the final wrench from the old life and the struggles with the new and unknown work of farming are sensations similar to those when one is flung beyond one's depth and has to kick out and swim, or sink. It is exciting, exhilarating, but—strenuous! One is reminded of Macbeth's 'Suppose we fail?' and Lady Macbeth's scornful—'Fail! But screw your courage to the sticking place and we'll not fail!' We realize that our success depends upon keeping our courage screwed 'to the sticking place.'

"It has been almost 10 years since we began our experiment. There was no investment about it. I had no money. A few old debts collected—perhaps three hundred dollars' worth—gave us the start. For some time it was a sort of scramble Not much system, but considerable 'method in the—madness,' as some thought it. We did what we could, and what we couldn't do went without doing."

But for the hope that we may have in the near future some account of her doings written especially for this department, further extracts would be given. That one number of Suburban Life makes the year's subscription worth while.

* * *

The Truth About Honey.—A few changes have been made in the reading of the Comb Honey Guarantee Circular for shipping-cases gotten up by The Honey-Producers' League, so that it will be suitable for bee-keepers to use in their correspondence, putting one in with every letter they write. It is headed, "The Truth About Honey," and is printed on both sides of a light manilla cardboard. It is sent postpaid in lots of 50 for 10 cents, 100 for 20 cents, etc. Every bee-keeper should use it, as it will undoubtedly help to popularize the use of honey.

The Guarantee Circulars for putting in shipping-cases should be used by every bee-keeper who sells comb honey by the case. These circulars are the same price—10 cents for 50 copies, postpaid. Send all orders to the American Bee Journal office.

* * *

Comb Honey Not Machine-Made.—We have a fair supply of the typewritten letter on this subject, which appeared in the Chicago Daily News of June 21, 1905. It is just the thing to have published in every bee-keeper's local newspaper. We mail it for a 2-cent stamp. Better order several copies, and request as many newspaper editors to publish it. It will certainly be a good thing for both the reading public and the bee-keepers.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses,
By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

What is a Carload of Honey?

How's the best way to get out of a bad scrape? Our Editor having been in position to know about carloads of actual honey on arrival, is very much better authority than I am as to how much is a carload. I seem to have made a certain estimate enormously too large. Suspect I went wrong largely from having looked at the new cars of the Lake Shore, which runs close by my apiary. Capacity is printed on the outside of each car—some of them 50 tons. But probably all the cars which I have seen marked 50 tons or more, were really something else than ordinary box-cars. When I was a boy cars were nearly all of two sorts, "Capacity 8 tons," and "Capacity 10 tons." Since then capacity has been very greatly increased. It is imaginable that the Pacific railroads (over which honey comes largely) may hang back on the capacity of cars. If 10-ton cars are still in fashion with them, they would be very unlikely to let a shipper send 20 tons in a car unless he paid double rates. And I think shippers of honey would generally prefer two cars to double quantity in one car, if charge per ton was the same. I didn't get beyond what can be made to go into a car. A cubic foot is a little less than 7½ gallons, equal to 90 pounds of honey. If we pack the inside of a car full of square tins of honey, not boxed, and the dimensions are 26x8½x7 feet (1547 feet), we have about 69 tons, of which some 3 or 4 tons would be tin and 65 tons honey. We will consider the 5,600,000 pounds corrected to 2,100,000.

Faith, and do I believe it now? Hardly know. Still a won't-lie-down suspicion that stories are told to influence the market. But the above surely shows how much the mathematical critic needs to be criticised himself sometimes. Page 725.

Cardboard Over Queen-Cage Candy.

But about the cardboard over candy, I'm not going to come down quite so far from my high perch. Dr. Miller is thinking of himself, and of the cardboard breeders select and send for the purpose. There is need to consider excited beginners—and the way they are foreordained to bungle things—and the cardboard they will hunt up and use. Some is thin, some five times as thick. Some is soft, some hard. Some is plain of surface, some with enameled surface. I suppose a sample could be found which even Dr. Miller's bees wouldn't get through in 5 years. Queens are also introduced to weak colonies; and cold nights unexpectedly swoop down. Queens are also introduced to blacks; and if blacks are really so much poorer at worm-hunting, it would rather follow that they are poorer at card-gnawing. Very many queens used to be laid a-top the combs, and we should not ignore the possibility of its being done that way still. That a weak colony on a cold night may draw away from such a cage altogether is a contingency which I think should not be overlooked. But I will cheerfully concede to Dr. Miller's large experience, that in the heart of a colony, and with cardboard of the right kind, and the right kind of bees, there is not much danger. Page 725.

Latest Swarms.

That late swarm of Dr. Miller's—Sept. 22—I was going to take as a record, and so having a certain value; but on reading to the end I doubt whether it was a normal swarm at all. Perchance it had been unprosperously in a tree or some place, and not sufficiently protected. Had merely picked up and all swarmed out from unendurable quarters. If so, going to the nearest apiary and alighting on a post would be just the proper thing to expect. If it had a virgin queen, however, as the latest true swarms usually do, my theory would stand disproved. I think my record for lateness is Sept. 5, or about that time. Page 715.

Outdoor Feeding of Bees.

Ernest Root has manifestly improved his outdoor feeding. Putting it up high in the air lets all the bees which fall have a chance to take wing before striking anything. And weakening the feed until they regard it as nectar rather than as plunder is an advance, too. I should hardly feel reconciled to anything that causes masses of bees to form and then drop; but if I understand correctly, comparatively little massing occurred in the last trials. Especially valuable is the experience that two 60-pound cans so worked actually kept an apiary of 300 queen-rearing colonies free from any eager disposition to rob. Page 693.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to Dr. C. C. Miller, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Cellar-Wintering of Bees—Introducing Queens, Etc.

As wintering seems to be the great problem with us, I would like to have your advice on the following questions:

Two years ago the number of my colonies decreased from 32 to 6. Last winter was considerably better—I lost but 10 colonies out of 30.

Last fall, after winter had fastened its grip on Mother Earth, I carried 2 light nuclei into the vegetable cellar, which is frost-proof. This cellar has no windows, and the entrance from the main cellar was screened with a heavy piece of carpet. As we had only one real thaw, the walls were dry most of the time. The nuclei were given a flight on Jan. 1, and no dead bees were found on the floor, and very few on the hive-bottom. Both came through in fine shape, and were replaced in the apiary on March 26, when soft maples began to open, and built up well in proportion to the bees they had.

Of the 10 colonies that died outside, all were much stronger in bees and had more honey; most of these were in chaff hives.

The bees in the cellar were in Danzenbaker hives, deep side of bottom-board up, and burlap sacking over the top. The temperature of the cellar ranged from 40 to 44 degrees, but was at 42 degrees the most of the time. The bees were very quiet all winter, only a low hum being heard.

1. Do you think it would be advisable for me to put a number—say half of my colonies—into this cellar this winter?

2. There is no means of ventilation except through the curtained doorway. The temperature of the main cellar is generally 2 or 3 degrees cooler than the vegetable cellar. If I lifted the curtain occasionally, would this provide the necessary ventilation?

3. In the spring one comb that was not covered by the bees had a little mildew or mold on it. Do you think the cellar was too damp?

4. Could an excess of moisture in the atmosphere be prevented by using lime, as spoken of by Editor Hutchinson in "Advanced Bee Culture?"

5. Do the walls of your cellar ever sweat during winter?

6. Is the humidity thus formed detrimental to the bees?

7. Are midwinter flights beneficial to bees when they are quiet in the cellar?

I have been having quite a little experience in late introduction of queens, and here is something that has happened twice in a very short time; I would like to know whether it is abnormal. As the cases are nearly parallel, I will cite but one of them:

About Oct. 1, I caught and killed the old queen and placed the new queen between the brood-frames. One week later I looked to see if the queen was laying. I found several sealed queen-cells, and feeling somewhat out of patience with them (as I then thought they had killed my choice queen), and as I did not care to continue that hybrid stock, I tore down the cells. When nearly through the hive I found a small cluster of bees on a bottom-bar. I smoked them gently, and was very agreeably surprised to find the queen. I rescued her at once and returned her to the cage with 4 or 5 young bees, provisioned it, and again put it between two brood-frames.

8. Was this the right thing to do? As the queen ought to have been out 3 or 4 days prior to this, and with the presence of several sealed cells, and as not an egg had been layed, I could not think of anything else to do.

About 5 days later I again opened the hive and saw the queen on the top of a brood-frame, between the hive-body and super, surrounded with bees; as they did not seem to be acting hostile I closed the hive at once. I did not use any smoke at the entrance, so the queen could not have been frightened. The queen is now laying beautifully.

9. I noticed in one of your answers that you said that to have a queen mated purely when the yard contains hybrids, the virgin queens or nuclei with select drones should be removed about 4 or 5 miles distant from any other bees. While this old doctrine is all right, I believe the limit is too far removed, unless we can do as E. L. Pratt does—go to the mating yard by trolley.

Last summer about 90 percent of the drones in my apiary were blacks or hybrids, and as I especially wanted to have some purely mated queens, I took some nuclei to the back end of the farm about one-half a mile from my apiary. Here I also took about two dozen hand-picked golden Italian drones. The experiment worked beautifully, as every one of the queens was purely mated. Unfortunately, I was not able to continue this experiment long enough to come to a definite conclusion as to the necessary distance. Baby nuclei also worked successfully at this distance. Perhaps a few old bees came home, but not enough to deplete the nuclei.

I have had many disappointments in the bee-business. Foul brood nearly wiped me out of existence once. But the bee-fever is still unbroken. We have had a nice flow of aster honey this fall, so bees are in good shape to winter.

10. Some of our pear-trees are in bloom now, and the bees have been working on them. Is not this abnormal, too?

Pennsylvania.

Answers.—1. Yes.

2. If the number of colonies is small in proportion to the size of the room, there will probably be no need of any attention to ventilation. With a larger number of colonies, there might be need to keep the curtain raised at night, or it might be partly raised all the time, provided the main cellar were sufficiently darkened.

3. Hardly worth while to pay any attention to mold if it occurs only on one comb. Dampness, darkness, and warmth make a combination favorable to the growth of mold, but there is a kind of very fine mold that some-

times comes on sealed combs in the cellar that doesn't seem to do any harm.

4. Yes. Raising the temperature will help, too, also admitting fresh air.

5. Yes; at any time when there is a long, cold spell, so that the stone wall becomes very cold, if the air of the cellar is warmed up, or warmer air admitted from outside, the moisture of the air will be deposited on the colder walls, just as it will on the outside of a pitcher of ice-water on a hot day.

6. I don't think it is.

7. Hardly, provided they will keep quiet later on.

8. Yes, unless it would have been better to have done nothing. It is a common thing for bees to start cells when a queen is introduced, and if left to themselves the bees may destroy these cells. At any rate, if the bees did not appear to be hostile to the queen there would seem no need to cage the queen, if indeed there was any necessity to destroy the cells.

9. While you may succeed in a few cases at half a mile distance, even as you may be having drones and queens in the same apiary, if you keep it up long enough you will likely have more failures than you will like. Still, nothing succeeds like success, and if half a mile continues to work with you there's no good reason why you should go further.

10. Decidedly abnormal, and no benefit to next year's fruitage.

Home-Made Comb Foundation

On page 648, J. E. Johnson speaks of a Reitsche-Getaz press, which makes fairly good brood-foundation, and only costs $1.50 and freight. Where can I get it? The foundation question is a troublesome and costly one to me. TEXAS.

ANSWER.—It can be obtained of Mr. Getaz. See his advertisement on another page.

Italianizing Bees—Artificial Increase

I have 10 colonies of black bees, and would like to introduce Italians.

1. What is the best and surest way to introduce an Italian queen?

2. I have tried three different queens, and followed the directions on the mailing cages that they came in, and they got away.

3. I had a strong colony of bees about the middle of the summer, and it cast a large swarm; I hived it, and about 30 days afterward I looked into the hive where the swarm came out, and there was only about 2 quarts of bees in it, and no brood. I looked for the queen, but could not find any. I put in a frame of brood, and they built queen-cells on it, and hatched out 2 queens. I destroyed all the rest of the cells. About a week afterward I looked, and no queens could be found, but one queen had layed about 20 eggs, and they had started queen-cells from them. I destroyed them and sent for an Italian queen, and they killed her. Now, what shall I do next? There is only about a quart of bees in the hive at this writing (Oct. 13).

4. Give me a good way for artificial increase. I have 8 strong colonies.

5 What bee would you recommend for profit?

6. Is the Carniolan a good variety?

7. Does it make any difference if a hive is opened after an Italian queen has just been introduced? I had one that was introduced all right, and layed about a thousand eggs. I opened the hive quite frequently to look at her, but the last time she was gone. What became of her? Do the bees ever kill the queen after she has been safely introduced and begun to lay? PENNSYLVANIA.

ANSWERS.—1. The surest way I know of is to have frames of sealed brood with young bees hatching out; fasten the queen in a hive with these, and without a single bee except her escort and what are in the combs; keep in a warm place, and in 5 days set the hive on its stand, and for a few days give a very small entrance. Instead of keeping in a warm place you can set the hive over a strong colony with wire-cloth between.

2. Hard to say just why you were so unfortunate, but sometimes a colony seems to be of such disposition that it is very hard to get it to accept a queen, although it will accept a queen-cell.

3. There is only one thing to do; break up the colony. That quart of bees is so old that it has no value, especially this time of year.

4. Take from a strong colony two frames of brood with adhering bees and queen, put on a new stand and imprison for three days. A week after the queen was taken away, let the two hives swap places. That will double the number. If you want to make more out of that one colony, you can divide the old colony into two or more nuclei at the time of swapping places, being sure that each has a good queen-cell located centrally where the bees will keep it warm, and then if necessary you can strengthen these nuclei after the queens get to laying by giving them brood from other colonies.

5. Italians are good.

6. Reports vary as to their value. Possibly all Carniolans are not alike in value.

7. Yes, it often happens that opening a hive will make the bees ball a queen, and sometimes kill her, even when she is laying.

Reports and Experiences

A Machinist Bee-Keeper

I am very much interested in bees. I am a machinist by trade, live in the city, but keep a few bees for pastime to break the monotony of shop-life; and then I like the honey to eat with warm biscuit. I keep from 3 to 6 colonies, and get from 100 to 150 pounds of comb honey in a season, and lots of pleasure working with the bees. J. T. HILLERY.

Franklin Co., Ohio.

Almost a Complete Failure

The past season was almost a complete failure. I obtained about 1200 pounds of honey from 74 colonies, spring count. I now have 84 colonies, and must feed at least 200 pounds or lose heavily the coming winter.

Scott Co., Ill., Oct. 28. P. B. THAXTON.

Hive-Tool and Bee-Escape Board

In speaking of hive-tools I will try to give a description of one I use, which I find very handy:

Take any old rasp, such as blacksmiths use, sharpen both ends (you can make it any width and length you desire—mine is about 10 inches long); turn one end the same as a garden hoe, making it about ¾ inch deep. Then you have a tool that you can pry off supers or spread frames, cut burr or brace combs, scrape propolis, smash cappings, or cut down thick combs.

Also, I find by my plan of fixing a Porter bee-escape I can clear supers of bees in ¼ the time usually required. I tack 4 strips on the escape-board, leading from each corner to the hole in the escape. Those strips guide the bees to the exit. I had been using this long before I saw any mention of it in the bee-papers. J. T. JONES.

Allegany Co., Md.

Expects Heavy Winter Losses

We have had a bad fall here for bees. I think there will be heavy losses until spring comes to us again. JOHN COCHEMS.

Manitowoc Co., Wis. Oct. 31.

Bait-Sections Changing Color

On page 746, W. N. Root wants to know why his bait or drawn sections change color, or have a dark or amber spot while the balance is white. If he will examine closely he will find the dark spot in the bait-section is where the honey candied during the cold weather. At least, that has been my experience. The past season I used about 35 bait-sections, and every one that I removed from the super contained a dark spot. On examining one I found it was solid honey.

Albany Co., N. Y. WM. B. LOWE.

Too Cold for Honey

Last spring my bees came out of the cellar in good condition—every colony alive. Frequent showers in June gave white clover a good start, but it was too cold for honey. During the last of July and part of August the bees did pretty well, but during September they would not work in the supers, but filled the brood-chamber full of honey, so they are in good shape for winter. C. SCHRIER.

Will Co., Ill., Oct. 27.

Not An Average Season

The yield of honey this season was slightly below the average, but the fall flow being fairly good the bees are in fine shape for wintering. Brood-rearing is being kept up quite well. This is especially true with the golden Italians and black colonies.

I can't quite like the 3-banded Italians for this section, as they slack up on brood-rearing during the honey-flow, and crowd the brood-nest with honey; and as our honey-flow lasts several months, they are not prepared to keep pace with the goldens, Albinos, and blacks. I think I shall like the Holy Land bees for this section, although I have only tried them this season, and with only one colony.

I am highly pleased with the American Bee Journal, and don't see how I have done without it. It is just what I need, and you may rest assured that I shall continue to read it. One issue was worth the subscription price for a year. WM. S. MCKNIGHT.

Barbour Co., Ala., Oct. 24.

CONVENTION NOTICES.

Illinois.—The 15th annual meeting of the Illinois State Bee Keepers' Association will be held in Springfield, on Tuesday and Wednesday, Nov. 21 and 22, 1905, in the room of the Board of Supervisors in the Court House. The R. R. Rates will be as follows: All lines in the Western Passenger Association will make an open rate of one fare plus 25 cents for the round trip to Springfield, except from near points where a fare and one third would be less. All lines in the Central Passenger Association will make a similar rate on the Certificate plan, and if not convenient for any attending our meeting to come over the lines in the Western Association, if they will write me I will send them certificates which the Grand Secretary of the I.O.O.F. assures me your local secretary of the same order will gladly sign. The Central Passenger Association Lines are as follows: B. & O. S.-W.R.R.; Big Four Route; C.& E I. R R.; C.H.&D.R'y; I.,I & I.R.R.; J.&St.L. R'y: L.E. & W. R. R.; L. & N, R. R.: Southern R'y (St. Louis Div.:) T., P. & W. R'y; T., St. L. & W. R R.; Vandalia Line; Wabash R. R., east of Tolono.

The good results of this annual bee-meeting rest on the members who attend it. Our State gives us an appropriation to publish our report and to suppress foul brood, and it is the duty of every bee-keeper of the State to have a voice in the manner in which this appropriation is used. All bee-keepers are invited to come, and bring their wives. The railroad rates will not be higher than an open rate of one fare and a third for the round trip, and efforts are being made by our Odd Fellow friends to secure a one fare for the round trip. Good hotel accommodations can always be had at reasonable rates. JAS. A. STONE, Sec.

Route 4, Springfield. Ill.

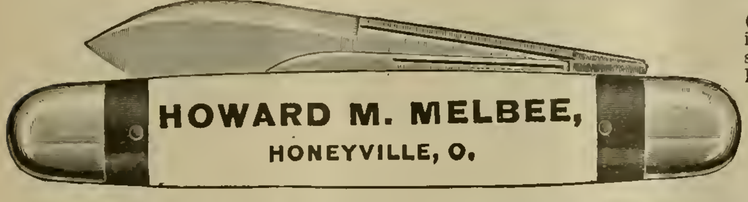
The Chicago-Northwestern Bee-Keepers' Association will hold a social session at the Revere House, Dec. 19, 1905, at 10 a.m. At 2 p.m. the same day will be held the regular annual election of officers. Any other business coming before the meeting will be attended to. All who are accustomed to paying their dues to our Association, thereby getting two memberships for the price of one, will please hand the $1 to the secretary, or mail it to him as usual. The time in the evening will be given to the National, as will also the whole of the two following days. Every one is cordially invited to be present, both at the short sessions of the Chicago-Northwestern, and at the 7-session meeting of the National Association.

HERMAN F. MOORE, Sec.

Park Ridge, Ill.

N. B.—Any one paying their dues to the National Association *direct*, will have to pay another dollar to the Chicago-Northwestern, if it is desired to become a member of the latter organization also. Hand your dues to H. F. Moore, the Secretary. H. F. M.

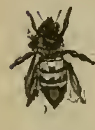
FOR YOURSELF OR AS GIFTS!



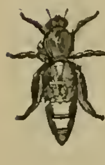
(This cut is the full size of the Knife.)

NOVELTY POCKET-KNIFE

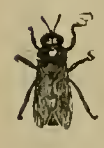
(Name and Address on one side—Three Bees on the other side.)



Worker



Queen



Drone

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the owner, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. It will last a life-time, with proper usage.

Why Own the Novelty Knife?—In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and, in case of death, your relatives will at once be notified of the accident.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or club the Novelty Knife and the American Bee Journal for one year—both for $2.00. (Allow two weeks for Knife order to be filled.)

A SOLID GOLD FOUNTAIN PEN

⅔ size

Finally, we have found a good Fountain Pen that is reasonable in price. The manufacturers of this pen say that if you pay more than $1.25 for other fountain pens, it's for the name.

This pen is absolutely guaranteed to work perfectly, and give satisfaction. The Gold Nibs are 14 kt., pointed with selected Iridium. The Holders are Para Rubber, handsomely finished. The simple feeder gives a uniform flow of ink. Each pen is packed in a neat box, with directions and Filler.

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☞ Sample copy of the American Bee Journal free; trial trip of three months (13 copies) for 20c; regular yearly price, $1.00.

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HIVES AND SECTIONS

Until March 15. Dovetail Hives, 8-frame, 1½-story, 1 25; 10-frame, $1.40; No. 1 bee-way Sections, 3.90; No. 2, $3.40; 24 lb. Shipping-Cases, 13c; Foundation, Smokers, etc., cheap. Send for 24 page Catalog free.

W. D. SOPER,
Rural Route 3, JACKSON, MICH.

43Dtf Please mention the Bee Journal.

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Bargain in Bee-Supplies

On account of removing from the city, I wish to sell at once the list of bee-supplies given below. Will sell the lot at less than one-half the present retail prices as shown by Root's catalog. They certainly are a big bargain.

7—8-frame hive-stands
2—8-frame wood-zinc boards
2—Danzenbaker Hive-covers
3—Reversible hive-bottoms
9—10-frame dovetailed supers
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24—8-frame dovetailed supers
9—8-frame dovetailed extracting-supers
2—10-frame dovetailed hives
3—8-frame dovetailed hives
75—M fences
1—Danzenbaker bottom and detachable alighting-board
10—8-frame hive covers
16—Hoffman top-bars
800—4x5x1⅜ sections (new)
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2—8-frame bee-escape boards
25—8-frame hives (new)
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500 plain sections (new)

$40 will take the lot if ordered at once.

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Send for free book 80-A. It contains telephone facts that are money-savers

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Revised by Dadant—Latest Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.20, or club it with the American Bee Journal for one year—both for $2.00; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

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$12.80 For 200 Egg INCUBATOR

Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day

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Best Bee-Hives, Sections, Comb Foundation, and everything the bee-keeper needs. Now is the time to buy for next season's use. **Lewis' Goods at factory prices.** Catalog free. Cash orders at catalog prices on such goods as mentioned in special list.

Before November	9 percent discount	Before February	6 percent discount
" December	8 " "	" March	5 " "
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Such as Shipping-Cases, Tin Cans, Buckets, **Glass Jars with patent spring sealers and glass stoppers;** regular Glass Fruit-Jars, etc. Sample cases for sending samples of extracted honey by mail. Special prices on Glass Honey-Jars and Tin Buckets.

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We have for sale a 6-inch Second-Hand Comb Foundation Mill. Used scarcely any; good as new. If interested write for price.

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Spanish-needle Extracted Honey put up in new 60-lb. tin cans—6c a pound for the lot, or 6½c for less, **F. J. GUNZEL, Weiner, Ark.**

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Also in strong RE-SHIPPING CASES of two dozen each, heavy corrugated partitions, sides, top and bottom—a perfect protection—

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Eight-ounce Tumblers, tin caps, 3 dozen in reshipping case:

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Tin 4-in. Smoke Engine	3½-inch	3-inch	2½-inch	2-inch Wonder
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Address,

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WANTED

Fancy White Comb Honey in Non-Drip Shipping-Cases; also White Clover Honey in cans and barrels. Please send samples and state your lowest price, delivered here. We pay spot cash upon receipt of goods.

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ESPECIALLY FOR THE SOUTH, AS ALL FREIGHT NOW GOES THROUGH CINCINNATI.

8 Percent Discount

For Cash Orders Received in

NOVEMBER

This applies to all goods with exception of Shipping-Cases and other Honey-Packages for current use.

At Root's Factory Prices

C. H. W. WEBER CINCINNATI ...OHIO...
Office and Salesrooms, 2146-48 Central Ave. Warehouses. Freeman and Central Aves.

Honey and Beeswax

Chicago, Oct. 5.—The demand for comb honey is about as usual for the season of year. Offerings from the surrounding States are fully equal to the past season, but that from Colorado and the Middle Western States are not. No. 1 to fancy white comb honey sells at 13@14c, with an occasional sale at 15c; the off grades embracing crooked combs, etc., sell at 11@12c; amber grades difficult to place at 9@10c. Extracted, white, 6@7c, according to kind, body and flavor and package; ambers 5½@6½ cents. Beeswax selling upon arrival at 30c if clean; off grades about 2c per pound less,

R. A. Burnett & Co.

Cincinnati, Oct. 6.—Reports from differex parts of the country give evidence of an almost total failure in the comb honey crop, excepting the points in the North. We are selling this Northern comb honey at from 14@16 cents per pound, by the case. The demand for extracted honey is about equal to the receipts, which are good. We continue to sell amber in barrels at 5¼@6c; white clover at 6½@7½c. For beeswax we are paying 30c per pound, cash, delivered here.

(We wish to call the attention of the producer to the above honey quotations, who mistakably expects to receive these prices for his product. The above are our selling prices.)

The Fred W. Muth Co.

Indianapolis, Oct. 12.—There is a good demand for strictly fancy white comb honey, demand and supply running about even. Demand for lower grades of comb honey not good. Numerous shipments of honey arriving, but no one producer seems to have very great quantities to offer. I quote fancy white at 15@16c; No. 1 in poor demand at 12c, and amber dull at 10c. Best grade extracted brings 8@9c in 60-lb. cans; amber slow at 5c. Beeswax, 28@30c.

Walter S. Pouder.

Albany, N.Y., Oct. 29.—Not much change in our honey market this week. Demand is good at 13@15c for clover; 11@13c for mixed; 11@12c for buckwheat. Extracted, white, 7@7½ cents; mixed, 6@6½c; buckwheat, 6@6½c. Beeswax firm at 30@32c.

H. R. Wright.

Philadelphia, Oct. 19.—Honey has been arriving freely in the last 10 days. There are still some small producers who have a few hundred pounds, and want to dispose of it quickly and get their money, who are keeping the prices down. We quote: Fancy white, 14@16c; No. 1, 13@14c; amber, 10@11c. Extracted honey rules firm at 5½@6½c for amber; 6½@7½c for white. Beeswax firm, 28c.

We are producers of honey and do not handle on commission.

Wm. A. Selser.

Kansas City, Oct. 9.—The honey market here at present is very strong at $3.25 per case for No. 1 and fancy white comb in 24-section cases; amber and other grades selling for less according to quality. Extracted in good demand at 6½c. Beeswax, 28c.

C. C. Clemons & Co.

Toledo, Oct. 17—The honey market remains firm, with good demand, and prices the same as last quotations. Fancy white comb brings 15c; No. 1, 14c; fancy amber, 13c; buckwheat, 13c. Extracted, white clover, in barrels, 6¼@6½c; amber, in barrels, 5@5¼c; in cans, 1c to 1½c higher. Beeswax in good demand, 26c cash, 28c trade.

Griggs Bros.

Cincinnati, O., Oct. 24.—The nice weather holds back the demand for comb honey. Crops seem to be exceedingly short and producers in the West keep the price high. We quote fancy water-white comb honey No. 1 white clover from 14@16c; No. 2 from 12½@14c. Extracted seems to be more plentiful. In barrels, light amber, 5¼@5½c; in cans, ½c more. White clover from 7@8c. Beeswax, 28@30c.

C. H. W. Weber.

New York, Oct. 20.—Comb honey is now arriving very freely and the demand is good for nearly all grades. We quote fancy white at 13@14c; No. 1, 11@12c; amber, 10@11c, and buckwheat, 10c. Extracted in good demand. Arrivals of California are large while from other sources receipts are very light. We quote California at from 5½@7c per pound, according to quality and quantity; Southern in barrels and half-barrels, at 55@60c per gallon. Beeswax firm and scarce at 29@30c.

Hildreth & Segelken

San Francisco, Oct. 25.—White comb, 1-lb, sections, 8@9cents; amber, 6@7c. Extracted water-white, 5@—c; white, 4½@4¾c; light amber, 3¾@4 cents; amber, 3@3½c; dark amber, 2½@3c. Beeswax, good to choice, light, 25@27c.

A rather limited amount of trading has been done during the current week for the reason that apiarists are hesitating to let their honey go at the present figures that buyers seem disposed to offer. The yield in southern California has been more than the average, but the bee-men are expecting to get a good price for it, as reports from other sections indicate a considerable shortage.

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FANCY COMB HONEY IN NO-DRIP SHIPPING CASES, ALSO EXTRACTED HONEY. IF YOU HAVE ANY TO OFFER, QUOTE US YOUR ROCK BOTTOM CASH PRICE DELIVERED HERE, AND MAIL US A SMALL SAMPLE OF THE EXTRACTED HONEY. WE BUY EVERY TIME THE PRICE IS RIGHT, AND REMIT PROMPTLY.

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Where you will be cordially welcomed, and where all information can be obtained regarding Convention and city.

Respectfully,
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1,000	@$4 60	per thousand
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WEEKLY—$1.00 A YEAR

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45th Year CHICAGO, ILL., NOVEMBER 16, 1905 No. 46

One of the Largest Orange Trees in California,

Near the Apiary of Mr. J. F. McIntyre, in Ventura County. Mr. M. is shown standing at the lower right hand corner of the picture.

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY
GEORGE W. YORK & COMPANY
334 Dearborn Street, Chicago, Ill.

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2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00

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(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

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1. Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.
2. Any honey-dealer, bee-supply dealer, bee-supply manufacturer, bee-paper publisher, or any other firm or individual, may become a member on the annual payment of a fee of $10, increased by one-fifth of one (1) percent of his or its capital used in the allied interests of bee-keeping.

GEORGE W. YORK, Manager,
334 Dearborn St., CHICAGO, ILL.

Italian Queen-Bee Free as a Premium

To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us ONE NEW subscription with $1.00 for the Bee Journal a year. Now is the time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.

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By a simple but effective mechanical arrangement and a new application of nature's laws the "CONTINUOUS" HATCHER makes it possible to keep up a continuous hatching of chicks from one machine—A FRESH HATCH EVERY DAY. Removing chicks from machine and replacing them with fresh eggs does not interfere with or retard process of incubation. This is possible with no other incubator. One

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Bee-Supplies bought NOW are subject to a generous discount from our regular low prices. We do this to keep our factory busy. Send us a list of what you need and we will make you a price by return mail that will convince you.

If you want a catalog that is more than a price-list—that contains valuable information on bee-keeping—you must hurry to have your name placed on our mailing-list. Only a limited number will be printed. It's free, of course.

JOHN DOLL & SON,
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H. M. ARND, Mgr.

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Good Goods at Factory Prices and Prompt Shipment, send your orders, or call on us.
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Medium Brood	.55	.53	.51	.49	.48
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Liberal Discounts to the Trade.

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Before October 1	deduct	10 percent
" November 1	"	9 "
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Freight-Rates from Toledo are the lowest. Can take Honey and Beeswax in exchange for Supplies if you desire. Send for free illustrated Catalog. It describes and illustrates everything for both the Poultry and Bee Keepers.

GRIGGS BROS,
521 Monroe Street,
TOLEDO, - OHIO.

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SPECIAL ISSUE of Gleanings in Bee Culture, Dec. 15, 1905

We are pleased to announce that extensive plans are under way for a magnificent Christmas issue of Gleanings in Bee Culture, ready for mailing Dec. 15th. It is planned that this issue shall by far exceed in its wealth of contributed articles, its half-tone illustrations, and its cover design, anything heretofore attempted in bee-keeping literature. It will consist of at least 100 pages, and should be kept by every bee-keeper.

Cover

The cover is printed in three colors by one of the best color-printing establishments in the United States. We were not satisfied to attempt this ourselves, and have gone to great expense for the printing of this cover. The design is something unique, and very pleasing indeed. It shows the red clover in its natural colors in all its beauty, and, altogether, will make a bee-keeper's magazine that will compare favorably with any of the literary magazines of the present day.

Half-Tone Illustrations

During the past summer we have had a special artist who has been sent to various points especially to take photographs for us. He has traveled on our account alone the past summer over 4000 miles, and we can promise something very fine in our half-tones for this issue. In this preliminary announcement we are unable to specify definitely the subjects that will be given, but those who are at all familiar with Gleanings for the past year will know that a treat in illustrations is in store for them. We can definitely announce now that some of the prize photographs in our second photographic contest, American and Foreign, will appear in this issue. Our engravings are made by the very finest engravers in the United States, insuring first-class work in every case.

CHRISTMAS 1905
GLEANINGS IN BEE CULTURE
THE A. I. ROOT CO.
MEDINA, OHIO, U. S. A.

Writers

For this issue we shall have our regular contributors, such as Dr. C. C. Miller, G. M. Doolittle, Prof. A. J. Cook, J. A. Green, and Louis Scholl, besides special contributed articles, especially for the number, by E. W. Alexander, Dr. E. F. Phillips, of Washington, D. C., and others.

Other Features

Not only shall we make the magazine a thing of beauty and special value in its reading-columns, but special attention will be given to making it of value as a reference-book—a sort of year-book for bee-keepers—so that it will be kept for frequent reference throughout the following year. We expect to have all of the reliable advertisers represented in its columns, such as the breeders of various races of queens, dealers in bees, dealers in general supplies, dealers in special articles for bee-keepers. It will be valuable alike to the advertiser and to the subscriber, and no bee-keeper in the country can afford to miss this issue; neither can any advertiser afford to miss the opportunity of being represented in its columns.

Subscription Rates

We are making a short-time offer—a special trial trip of 6 months for 25 cents, which will include this Dec. 15th issue. This one number alone should be worth 25 cents to any bee-keeper. We can not promise to hold this offer open indefinitely, for our cover pages will necessarily have to go to press considerably in advance of the day of publication; and after the number contracted for are sold, we shall not be able to supply additional copies. It is important, therefore, that your subscription be received promptly.

WANTED—25 YOUNG MEN

There is now, and has been for years, a greater demand for experienced bee-help than there are men ready for these places. Each winter and spring we are obliged to disappoint many large apiarists by telling them we do not know where suitable help can be found. The demand is already begining for the season of 1906.

We have found that many who take our course in bee-culture by correspondence prefer to go into business for themselves, so we still need active young men who have a fair knowledge of the subject—men whom we know something about—who can be recommended for the places frequently offered. We have, therefore, determined to-day to offer a limited course in

BEE-KEEPING BY MAIL

We shall desiginate this as Course No. 2. The lessons are identical with the lessons in Course No. 1. The time, however, is limited to one year from enrollment. The course may be easily completed in 3 to 4 months. The following is the

OUTLINE OF COURSE

1. Definitions of Terms
2. Inmates of the Hive
3. Comb
4. Handling Bees
5. Transferring
6. Building Up Colonies
7. The Honey-Flow
8. Swarming
9. Rendering Normal
10. Preparing for Winter
11. Wintering
12. Spring Management
13. Bee Diseases—Symptoms
14. Enemies of Bees
15. Establishing an Apiary
16. Queen Rearing
17. General Examination

TERMS OF COURSE 2—FULL-CASH PAYMENT

Complete course as outlined, lessons, personal answers to all questions, including the A B C of Bee-Culture (500-page book,) and Gleanings in Bee Culture, (semi monthly,) for one year, $5.00.

With either the A B C or Gleanings omitted in case you have one, $4 00.

With both omitted in case you have both, $3.00.

If a full colony of Italian bees with tested queen is wanted, in either Dovetailed or Danzenbaker hive, we will, for $10.00 extra, deliver one colony at your express station, at any point in U.S. east of the Mississippi River, or make equal allowance to other points.

CUT HERE

The Root Correspondence School of Bee Culture, Medina, Ohio.

....190......

Enclosed find......................in payment of one course of instruction (No. 2) in the Root Correspondence School of Bee Culture.

Name.. P.O.. State..........................

County or Street .... Express Office..

Please answer the following: Have you a colony of bees?.................. Have you an ABC of Bee Culture of 1903 or 1905, which?.................... Have you already subscribed for Gleanings this year?....................

ESTABLISHED IN 1861

THE AMERICAN BEE JOURNAL

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GEORGE W. YORK, Editor | CHICAGO, ILL., NOVEMBER 16, 1905 | Vol. XLV—No. 46

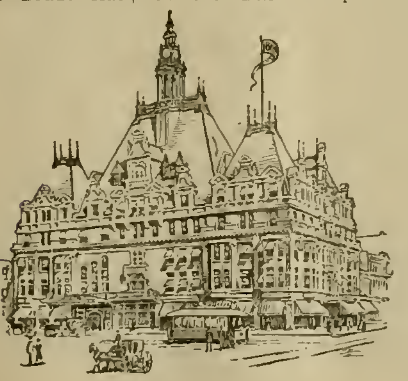
THE AMERICAN BEE JOURNAL is absolutely an independent publication, and not connected with any bee-supply business whatsoever. It stands entirely upon its merits as an educative force in the field of bee-keeping, and as a medium for legitimate advertisers in apicultural or other lines. It is the oldest, and only weekly, journal of its kind in America. Its publishers believe that it deserves to be in the hands of every would-be progressive successful bee-keeper in the land. It is in its 45th year, and to-day is acknowledged to be better in every way than at any time during its long and honorable history.

Editorial Notes and Comments

National Convention Postponed Two Weeks—Now Dec. 19, 20 and 21

We have received the following from Secretary Hutchinson:

Another slight postponement of the National convention seems to be unavoidable. The Fat Stock Show, upon which we have depended for reduced rates on the railroads, has been postponed two weeks. The reason given is "the inability of the builders of the amphitheater to secure structural steel for the same," and they don't wish to hold the show out-of-doors, hence the delay. Of course there will be no excursion rates during the first week in December, and, as it would be suicidal to attempt to hold a convention without excursion rates, the Executive Committee has decided to postpone the convention two weeks in order to take advantage of the Fat Stock Show rates. The dates for the convention will now be Dec. 19, 20 and 21, 1905.



BUSH TEMPLE OF MUSIC

The place of meeting has also been changed to Brunt Hall, in the Bush Temple of Music, corner of North Clark Street and Chicago Avenue (entrance on Clark Street.) This was done because it was feared that the accommodations at the Revere House might prove too limited. The Chicago bee-keepers, with their customary enterprise and liberality, will pay for the use of the Hall. It is only 5 minutes walk north from the Revere House, which will be headquarters for the members. This new place of meeting is in a new building where everything is modern. There are adjoining committee rooms, toilet rooms, good drinking water, and elevator service both day and night.

W. Z. HUTCHINSON, *Sec.*

Now that the time of holding the National convention is finally and definitely settled, we hope a large number of bee-keepers will find it a very convenient time to get away from home for a few days and attend the meeting. Surely, it is late enough, so that all the fall farm work will be out of the way. The only thing that might prevent attendance would be the chores—caring for the farm stock, etc.—but doubtless some arrangement can be made for that, so that nothing will suffer while attending the National convention.

The following is the revised

PROGRAM FOR THE NATIONAL CONVENTION.

FIRST DAY—TUESDAY.

EVENING SESSION—7:30 P.M.

Wax-Rendering Methods and their Faults—O. L. Hershiser, Buffalo, N. Y.

Can the Tariff on Comb Honey be Tinkered to the Advantage of the United States Bee-Keeper?—Hildreth & Segelken, New York.

SECOND DAY—WEDNESDAY.

MORNING SESSION—9:30 A.M.

How Many Bees Shall a Man Keep?—E. D. Townsend, Remus, Mich.

Short Cuts in Bee-Keeping—M. A. Gill, Longmont, Colo.

Question-Box.

AFTERNOON SESSION—2:00 P.M.

The Control of Increase—L. Stachelhausen, Converse, Tex.

Migratory Bee-Keeping—R. F. Holtermann, Brantford, Canada.

The Dietetic and Hygienic Relations of Honey—Dr. E. L. Eaton, State Analyst Illinois Food Commission, Chicago.

Question-Box.

EVENING SESSION—7:30 P.M.

Contagious Diseases Among Bees and How to Distinguish Them—Dr. Wm. R. Howard, Ft. Worth, Tex.

Experimental Apiculture—Dr. E. F. Phillips, Washington, D. C.

THIRD DAY—THURSDAY.

MORNING SESSION—9:30 A.M.

The Honey-Producers' League—Can it Help Bee-Keepers?—R. L. Taylor, Lapeer, Mich.

The Business End of Bee-Keeping—N. E. France, Platteville, Wis.

Successful Experience in the Making of Honey-Vinegar—H. M. Arnd, Chicago.

Question-Box.

AFTERNOON SESSION—2:00 P.M.

In What Way Can Bee-Keepers Secure their Supplies at Lower Prices?—W. H. Putnam, River Falls, Wis.

How the Producer and Dealer May Advance their Mutual Interests—Fred W. Muth, Cincinnati, Ohio.

Question-Box.

EVENING SESSION—7:30 P.M.

What Have We to Hope for from the Non-Swarming Hive?—L. A. Aspinwall, Jackson, Mich.

Poultry Keeping for the Bee-Keeper—Emerson T. Abbott, St. Joseph, Mo.

◆

Government Distribution of Queens

We have received the following:

WASHINGTON, D. C., Oct. 30, 1905.

DEAR MR. YORK:—I inclose a circular letter which outlines a plan of distribution which is to be followed by the Bureau of Entomology in the future. If you wish to do so you are at liberty to publish it in your Journal, as it may be of interest to some of your readers.

Yours very truly,
E. F. PHILLIPS,
Acting in Charge of Apiculture.

The circular letter referred to by Mr. Phillips, reads thus:

DISTRIBUTION OF QUEEN-BEES.

It has been customary in the past for the Bureau of Entomology to distribute a limited number of queen-bees of the more rare varieties to bee-keepers. This distribution is not intended to be general, since that would be impossible; and, to prevent misunderstanding, the following method, to be used in all future distributions, is announced:

It is desired that some of the less common varieties which have proven so good may become more widely known among the bee-keepers of the country, to take the place, in so far as possible, of the common black bees and of certain strains of Italian bees which seem to have deteriorated.

Carniolan bees are very prolific and are, at the same time, gentle, and there are records to show that as honey-producers they are excellent. The recently introduced Caucasian bees, which have attracted considerable attention, are the most gentle bees known at the present time, and records of honey-production now coming in indicate that they are excellent. The Cyprian race, which has been criticised on account of its temper, ranks second to none in honey-production.

Of these races, the Carniolans are sold in this country to some extent, and the Cyprians in less numbers; so far no queen-breeder has offered Caucasian queens for sale, and there is, without doubt, an opportunity for a wide sale of these queens, as evidenced by the requests which come to the Bureau of Entomology.

The Bureau can do more toward the wider introduction of these races by inducing reliable men to take up the rearing of pure-bred queens than by a more general distribution. It is not the purpose merely to give away queens, and the future distributions will be limited as follows:

To any experienced queen-breeder who will guarantee to rear queens and mate them purely in considerable numbers for general sale, the Bureau will send, as far as the supply will allow, one high-grade breeding queen, purely mated and carefully tested. In addition, several queens whose matings are not known will be sent for drone-production, since drones are not affected by the mating; all queens, however, will be from good stock, the number to depend upon the supply at hand. The breeder making the request must give evidence of his ability to rear good queens, must agree to offer at least 200 pure-bred queens a year for sale to the general public, and must not ask for them an exorbitant price. It is the opinion of the Department that 20 percent more than the current price for Italian queens would be fair. It will also be expected that in future years the breeders will do their utmost toward the improvement in honey-production, at the same time maintaining the purity of the races. The Bureau will be glad to aid breeders of this class to its utmost ability, but will not aid in any way a breeder who offers for sale or sells crossed hybrids of the various races, except in the case of untested queens, and even in that case, every possible effort should be made to get pure matings.

After this distribution, all inquiries to the Bureau will be answered by giving a list of reliable breeders, including those who have received stock from the Government apiary; and the name of any breeder who knowingly sends out inferior stock will be dropped. It is not the purpose to interfere with the private business of the persons receiving queens, but these precautions are taken to protect the bee-keepers of the country.

No applications for queens under other circumstances will be considered. All applications will be considered in the order of their receipt.

Yours respectfully,
L. O. Howard,
Entomologist.

Approved:
James Wilson,
Secretary of Agriculture.

That Bee-Tanging Business

The following is from Prof. Bigelow, with reference to an editorial on page 709:

Founded On Fact or On Foolishness?

Editor American Bee Journal—

In your issue of Oct. 12, I note that you refer to my discussion in Gleanings in Bee Culture as to whether or not noise has any effect on a swarm of bees, or whether the custom known as "tanging" at swarming-time (as practiced for generations by our ancestors) had absolutely no relation to the habits of the bees, but was founded on a forgotten edict by Alfred the Great as to ownership.

It is evident that you got only an imperfect notion of what I am driving at, for you refer to the article as a "sort of defense of the custom." What I had in mind, and what I supposed that I had made clear, has no connection of any kind with present-day apiculture. It is evident that I am looking at bees so completely from the natural-history point of view, while you and certain other editors are so interested in the practical and manipulative parts of the business, that there is danger of our misunderstanding each other. I will try to make my meaning clearer in the future.

If, for example, I had advanced arguments, in a sportsman's paper, to show that fish have auditory organs, I should be more surprised to see the editor teach, on my responsibility, that it would be possible to attract fish to a net by the use of a bass drum and a cornet, than I am to learn that you and certain other writers think that I am advocating the restoration of the ancient custom of "tanging" at swarming-times. I am advocating nothing of the kind, so far as practical bee-culture is concerned.

To return to the illustration: Every practical fisherman knows, for instance, that fish have an auditory sense, but of what use he can make of that fact is for him to decide. I am not a practical fisherman. I am a student of Nature.

I stated certain facts from my experience that led me to think that the "city chaps" and the funny papers are all wrong in ridiculing the custom. The editor of Gleanings in Bee Culture seems not to miss the point, but in an editorial comment cites, from his own experience, facts bearing upon the subject, but you and a writer in his periodical almost ridicule me for "advocating the custom."

What I want to bring out is not ridicule for advocating tanging (when I am not advocating anything), but facts pro or con from the experiences of practical bee-keepers to show what effect, if any, noise and confusion have on a swarm of bees. We know that bees can be influenced by smoke. Can they be driven or influenced by sound, or by light (such as the flashing of sunlight from mirrors), or by confusion in any form. Is there a central or directing leadership, that such noises, light, or confusion, break up?

Let us occasionally stop our talking about the production of honey, and thereby the production of money, and try to know the bee.

Yours very truly,
Edward F. Bigelow.
Fairfield Co., Conn.

Prof. Bigelow says there is danger of misunderstanding each other, which is certainly true, but it is equally true that there is no desire to misunderstand or to misrepresent him. His article in Gleanings, page 957, was most assuredly understood as a "sort of defense" of tanging, and there is just as assuredly a misunderstanding of Editor Root's footnote if the latter viewed it in any other light. His opening sentence reads:

> "It is possible that bee-keepers heretofore have not given enough attention to the subject of noises of some kind to drown swarming-notes, either of the queen or of the scouts; but from experiments which I have made myself I am satisfied that water from a spray-pump, thrown on bees while in the air, is vastly more effective than any noise that may be made."

However he may have understood Prof. Bigelow, Mr. Root certainly seems to be discussing the efficacy of tanging as compared with spraying.

But Prof. Bigelow's word is sufficient warrant for the fact that he does not advocate tanging, and it is worth while to consider the questions he raises in the latter part of his communication. Can any one give facts that have a reasonably certain bearing on the case? Such facts will be welcomed.

National Convention in Chicago

Secretary Hutchinson writes thus prophetically in the October Bee-Keepers' Review about the Chicago convention of the National Bee-Keepers' Association, the dates of which have been changed to Dec. 19, 20 and 21, as the annual Fat Stock Show was postponed two weeks, on account of which bee-keepers will secure reduced railroad rates:

> The coming convention of the National, that is to be held in Chicago the third week in December, promises to be well attended and profitable. While its removal to Chicago was a disappointment to the Texans, I have received several letters from them saying that under the circumstances the change was a wise one. Of course, if all goes well, another year we will feel in duty bound to go to Texas; not only this, but we will be *glad* to go. Since the announcement that the convention will be held in Chicago, I have received many letters from men who are pleased with the change, as it will allow them to attend.
>
> So far as I can see, the convention promises much. Apparently there are no feuds, no opportunities for squabbles and bickerings; the date comes after the hurry of the season is over; there will be exceeding low rates on the railroads, and low rates at the hotels; Chicago is the railroad center of a great honey-producing region; the program is not only varied, but it embraces living, practical topics. I predict that the Chicago convention will be a rousing one; harmonious and full of practical discussion; and one from which men will go home feeling that it was good that they had been there.

We trust that all of Mr. Hutchinson's fond hopes for the Chicago convention of the National Bee-Keepers' Association will be realized on Dec. 19, 20 and 21. We see no reason why it should not be far ahead of any preceding convention. Surely, as time goes on, and as more experience is gained, there should be a constant progress on the part of all.

Secretary Hutchinson has done his part to make the coming convention the best ever. It only remains for all the bee-keepers, so far as possible, to attend and unite in producing an individually pleasant and profitable convention.

Fined for Selling Impure Food

A Chicago newspaper of Nov. 4 contained the following item concerning the punishment of some violators of the Illinois pure food law:

> Galesburg, Ill., Nov. 3.—[*Special.*]—Twenty-two grocers, arrested on a charge of violating the pure food law by selling chemical vinegar, spurious butter, and bogus honey, paid their fines of $25 and costs each to-day, all pleading guilty. The plea is made by the grocers that the goods were represented to them as pure.

Well, 22 fined in one bunch isn't bad. Let the good work go on. Surely, it is evidence that the Illinois Food Commission is still doing business. The pathway of the adulterator and the seller of adulterated food must be made as rocky as possible. It is time that the common people—all food consumers—were protected from food frauds.

Comb Honey Guarantee Circulars.—These were gotten up by The Honey-Producers' League, to be put into shipping-cases before nailing them up for market. They are mailed for only 10 cents for 50—practically cost price. Every bee-keeper who has any honey to sell by the case should use these circulars. They will help to inspire confidence in the genuineness of comb honey. Send all orders to this office.

Maeterlinck's "Life of the Bee."—We have a few copies of this book, price, postpaid, $1.40; or with the American Bee Journal one year—both for $2.00, as long as the books last. It is a cloth-bound book, and has 427 pages.

Contributed Special Articles

Methods of Bee-Management in Idaho

BY E. F. ATWATER

MR. GETAZ, in his mention of my methods and system on page 727, has inferred a little more (from an article in the Review) than the facts, and two more years of experience have somewhat changed my practice.

About half of our bees are now run for comb honey. We continue to winter them in open sheds facing south, or else pile them up in a long row, and protect the rear and top with tar-paper. In this section (Boise Valley) high winds are rare, and for low average wind velocity there are few places to compare with it. One bee-yard is wintered on the summer stands, as they are in a very sheltered location.

For comb honey we use the 8-frame standard hive, sometimes 1½ or 2 stories high, but mostly 1 story at all times. For extracted honey we have mostly 10-frame Langstroth hives, but the bees are often wintered in 1½ stories, and what strong colonies they contain in the spring!

There are serious objections to the use of a very large frame (Dadant), but if the use of the 10-frame Draper barns could be relied on to control swarming, I would use them. A friend has 80 colonies in 13-frame Dadant hives, but they will swarm at times.

I have 2000 plain, shallow extracting frames hanging on nails, but they have not come up to my expectations. My helpers always despise them.

For comb-honey hives we use Hoffman frames almost entirely, and if I were to begin again, I *think* the Hoffman frame would be best, even for extracting, though I don't know how well they would work in 10-frame hives, where there is no room for the division-board.

For the past two seasons, I am sorry to say that an abundance of empty comb has not prevented swarming as well as it should. Also, with Langstroth combs in the brood-chamber and *shallow* combs above full of worker-comb, the need of a queen-excluder is greatly lessened.

I plead guilty to hauling my extracting outfit from yard to yard, but I hope to have a portable shop at each yard ere long.

Ida Co., Idaho, Oct. 30.

Wintering Bees on Solid Combs of Honey

BY C. P. DADANT

I HAVE read with interest the article on this subject, on page 744, by Mr. J. L. Byer. I note his experience and suggestions. It is impossible to write on the same subject for years and not find some one whose experience differs from ours, and whose views are consequently opposite. From the different results thus brought to light the reader can gain additional information which book-reading will not give.

Mr. Byer and myself have placed ourselves in different positions at the outset. I wrote about colonies that have become too heavy with honey. He writes about colonies that have not enough, and must be fed, and his method is to feed till the combs are entirely filled. This would be entirely unnecessary here, as the bees do not need so great an amount of honey, and it would be as Mr. Hall told him—it would increase the work in fall and spring.

In a state of Nature no colony will have its brood-combs entirely filled—at least this is my experience—unless the queen has failed in her laying during the latter part of the honey crop. Besides, the bees will always keep the space empty in the center, if they keep any empty space at all. When we open a hive at the end of the last harvest we find the outside combs fuller than the others. If the bees enjoyed having the combs on which they cluster entirely filled, they would fill these from the outer ones as fast as the brood hatches. But if the old queen has ceased laying, and a young one has been reared, they will, if everything else is full, fill up the honey cells as fast as the brood hatches. A hive thus filled is not in a good condition for winter, as there is no room for brood. I have invariably found that such colonies would dwindle down and die out. A little space given to a young queen before the season is too far advanced will induce laying, and the colony will go into winter in better shape.

I have never seen bees winter well with a hive entirely filled by them from the fields, though I am free to acknowledge that it may be mainly from their having failed to breed as late as they should have done; but I am yet of the opinion that full combs are not desirable. Whenever I have supplied a needy colony with combs full to the bottom, I have found that they avoided clustering upon them, and showed their preference for combs in which there was a fairly good space of dry comb under the honey on which to cluster. A very powerful colony will winter anyhow, if it has enough food, but a very powerful colony will never have its combs entirely filled, for it breeds to the end of the honey crop. I saw one instance, years ago, where a colony filled every cell and then dwindled to nothing before the winter was fairly begun.

Mr. Byer relates that he has fed colonies that were needy until the combs were filled to the bottom. In this latitude, if we were to feed a needy colony plentifully, the queen would begin to lay, and a portion of the combs in the center of the hive would be occupied with brood. This brood would hatch and consume enough of the stores to make a fairly good space for the bees to cluster upon at the approach of cold weather, and of course this space would increase as the weather became colder, since the bees begin to consume at once, thus making a sufficient space within a few weeks. But our latitude evidently differs from that of which Mr. Byer writes, for we never have seen five months of winter confinement without a flight on the summer stands. That would mean the failure of a single warm day from Nov. 15 to April 15. The bees here would suffer from overloaded bowels before that time. Perhaps this is due to a greater excitement during mild days, owing to the warmth of the sun which shines hotter here than further North.

I repeat it, I am strongly in favor of placing the bees in the natural condition which they seem themselves to seek—the possibility for them to cluster on dry comb where they can keep the space warm more easily, and breed if so inclined right under the honey. There is no gain in their having more honey than they can well consume during the cold weather, and for spring use the honey of the outside combs, which are usually well filled, is sufficient for all their needs. Yet it is better to have an excess than a shortage, and too much is better than not enough.

OLD BEES FOR MAILING WITH QUEENS.

On page 746, Mr. Hasty wants to know why we prefer old bees to accompany a queen that is sent away. I did not want to be understood as wanting *very* old bees. But we want to avoid using young bees that have not yet taken flight, because they consume more honey than the old ones, and are therefore more likely to suffer from diarrhea in a long trip. Bees that have been to the fields are just right. They have become mature, and it takes little to sustain them.

Of course, with sugar feed the age of the bees is of less importance than when honey is used as it was formerly.

Hancock Co., Ill.

Some Experiences with Bees

BY A. F. FOOTE

IN looking over the American Bee Journal for Oct. 12, I came across many things that make me feel as if I must "speak out in meeting." In fact, I feel about the same whenever I read any of those papers.

I had a little experience last summer—something on the line of Dr. G. Bohrer's (page 711), where there must have been two queens in one hive for 20 days, though I actually saw but one. The experience was this:

On July 2, 2 large swarms came out and clustered together. As has been my custom in such cases, I put them all into one hive, putting on 3 supers to give them plenty of room; but they were not satisfied, and on the third day they deserted the hive in a body and all clustered together again, and I put them into hive No. 2, adding 3 supers as before. This time they went to work with a will, and on the 10th day I added the 4th super. On the 20th day after putting them into hive No. 2, fully two-thirds of them came out with a rush, and were placed in hive No. 3, with 2 supers added.

Examining No. 2, I found they had completely filled and capped the first 3 supers, and nearly filled the 4th. I removed the full ones, leaving the partly-filled one, which the remaining bees finished up in good shape and still occupy it—a good, strong colony, too.

Those which I put into No. 3 filled their 2 supers, and, like the others, are now strong in bees and honey.

It looked to me as if there were 2 queens in hive No. 2 during those 20 days. Anyway, they stored nearly 150 pounds of section honey, besides putting enough in the brood-chamber for winter.

I started in the spring with 30 colonies, and increased to 50. The honey season was short, but very brisk, and my harvest amounts to just about 71 pounds to the colony, spring count.

I have never followed Dr. Miller's plan of using bottom starters, but all my sections during the main honey-flow were filled clear to the bottom with barely a small bee-space at the corners. A few sections, near the end of the season, were capped before reaching the bottom. Perhaps with bottom starters these would have been filled also, but I have my doubts.

I am not in favor of filling a lot of supers beforehand in anticipation of a big honey crop, with a liability of having a lot left over unused. My plan is this: I prepare enough beforehand to go around, one super for each colony; then, when the swarming season approaches I go into the shop and begin work folding sections, putting in starters and filling supers, and I am right there ready to attend to every swarm that issues. So I have something to keep me busy between times, and do not have to sit around doing nothing, waiting for the bees to swarm. Even with this method, the sudden closing of the honey-flow the past season found me with about 50 supers on the hives with little or nothing in them.

Capturing swarms after they have clustered has been rather a serious matter with me on account of so many tall trees near my apiary. My swarm-catcher is a light frame one foot square, and the same in depth, lined with cloth. This I fasten to the end of a pole, and to lower a large swarm safely to the ground on the end of an 18-foot pole is rather a tough proposition, requiring the exertions of a strong man. But last summer I hit upon a scheme that makes the matter comparatively easy, unless the swarm is more than 20 feet high. I fastened a pulley at the top of my longest pole, through which a ¼-inch rope is run, and a bracket at the bottom to fasten the rope to when "fishing" for a swarm up a tree. One end of the rope is provided with a snap to fasten the swarm-catcher.

When ready for business I set the pole under the swarm, pull the swarm-catcher to the top, fasten the rope to the bracket at the bottom, shake the swarm into the box, and let it down "just as easy as falling off a log," and with greater satisfaction. This solves the problem very well when the swarm is within reach of the pole; otherwise a ladder has to be used, which is very much against my "constitution."

Last summer I tried "shooting" a swarm that had clustered nearly 40 feet high. I was skeptical about being able to cut the limb off with a shot-gun, but it came off slick and clean the first shot. Still, that did not help me to secure the bees, for, as I predicted, when they found themselves falling a large part of them broke the cluster and took to wing, while intervening limbs scattered the rest. All then "rose to the occasion," and clustered higher than ever, so I had to resort to the ladder after all.

Several years ago I had a swarm in the air which seemed determined to go to the woods. My wife came to the door and said, "Why don't you take the shot-gun and shoot into them?"

"What for?" I asked.

"Well, you might kill the queen."

"True," I replied, "I might stand one chance in a thousand or two of hitting the queen, but I don't believe it will pay to try."

It is so with "shooting" a swarm; one *might* bring a cluster to the ground in a body, but I don't believe it pays (me) to try.

A few words about assessing bees and I am done. On the assessor's roll here everything supposed to be liable to taxation is printed, but bees and poultry are not mentioned, and are not assessed. I tried once to get my bees insured, but the agent refused to do it. So why should I pay taxes on them?

Mitchell Co., Iowa.

Some Facts About Honey and Bees.—This is the subject of an article written by Mr. J. E. Johnson, and published on pages 581–82 of the American Bee Journal for Aug. 25, 1904. We have republished it in 4-page leaflet form for general distribution, and furnish it, postpaid, at 35 cents per 100 copies. Send all orders to the office of the American Bee Journal

Convention Proceedings

Report of the Texas Convention

BY LOUIS H. SCHOLL, SEC.

(Continued from page 567)

As the National Bee-Keepers' Association meets in San Antonio next fall, F. L. Aten suggested that we must have some funds for the entertainment of the guests. Mr. Scholl thereupon read a paper from H. H. Hyde, Chairman of the Committee of Arrangement and Entertainment of the National Bee-Keepers' convention at San Antonio, concerning the expenses of the entertainment. [There was much further reference to this subject in the report, but since the meeting of the Texas convention it has been decided to hold the National meeting this year in Chicago, so we omit that portion of the report.—EDITOR.]

Pres. Laws—At the last meeting of the committee of the Farmers' Congress it was decided that the mornings of each day were to be taken up by the independent sessions of the Congress. The afternoons will be taken up by the general sessions of the Congress in the Assembly Hall.

He also spoke of the delegates to which each session of the Congress is entitled, to vote upon matters of the Congress as per Art. VI of the Constitution and By-Laws of the Texas Farmers' Congress, as follows:

ARTICLE VI.

SECTION 1.—*Resolved*, That in all matters of business relating to the Constitution and By-Laws of this Congress, that the vote shall be taken in executive session, and each elector from recognized State organizations shall represent 25 active members from the State organizations participating in the work of this Congress.

SEC. 2.—Recognized district and county agricultural organizations shall have representation not to exceed 5 votes, and one person shall not represent more than one organization. Each district and county agricultural or kindred organization shall be entitled to one vote in executive session for 100 members or less, and one additional vote for each additional 100 members—not to exceed 5 votes for each organization as above provided.

For this the following delegates were elected: W. H. Laws, F. L. Aten, Willie Atchley and J. M. Hagood.

Pres. Laws then concluded the general business by appointing the following committees:

Committee on Program for Next Meeting—Louis H. Scholl.

Committee on Resolutions: Willie Atchley, L. W. Bell, and C. A. Butts.

Committee to Examine and Report on the State Experimental Apiary: W. O. Victor, Udo Toepperwein, J. W. Pharr, J. M. Hagood, T. P. Robinson and W. C. Conrads.

It was made a point for all the bee-keepers to meet and examine the Experimental Apiary at 5 o'clock Wednesday afternoon, and all who wished to go were invited by Mr. Scholl, the apiarist, to attend.

Mr. Hagood asked that the Constitution and By-Laws of the Texas Bee-Keepers' Association be read or given out to the members, as especially the new members desired to know more about the objects and purposes of the Association. The Secretary was instructed to give this information, and he explained the ends and purposes of the Association.

CONSTITUTION

ARTICLE I.—NAME.

This organization shall be known as the "Texas Bee-Keepers' Association."

ARTICLE II.—OBJECTS.

Its objects shall be to promote the interests of bee-keepers; the exchange of thoughts, experiments, etc., in apiculture through the meetings of this Association, and through a closer relation of its members.

ARTICLE III.—MEMBERSHIP.

SECTION 1.—Any white person who is in accord with the objects and the aims of this Association may become a member upon the payment of $1.00 to the Secretary-Treasurer; payment to be made at or before each annual meeting of this Association, or not later than 10 days thereafter. Membership will continue as long as all dues are paid up.

SEC. 2.—Any person may become an honorary member of this Association upon a two-thirds vote of the members present.

ARTICLE IV.—Officers.

Section 1.—The officers of this Association shall be a President, a Vice-President, and a Secretary, who shall be ex-officio Treasurer.

Sec. 2.—The officers shall all be elected annually by ballots of the members of this Association at their annual meeting.

ARTICLE V.—Duties of Officers.

Section. 1.—*President*—It shall be the duty of the President to preside at the annual meetings of this Association, and to perform such other duties as may devolve upon the presiding officer. The President shall be ex-officio Vice-President of the "Texas Farmers' Congress."

Sec. 2.—*Vice-President*—In the absence of the President, the Vice-President shall perform the duties of President.

Sec. 3.—*Secretary*—It shall be the duty of the Secretary to keep the records of this Association; to make a report of the annual meetings; to receive membership fees; to make a report at the annual meetings and perform such other service as the Association may direct.

Sec. 4.—The President, Vice-President and Secretary shall form an Executive Committee. Their duties shall be such as usually fall to such officers.

ARTICLE VI.—Funds.

Section 1.—The Secretary shall remit to the General Manager of the National Bee-Keepers' Association within two weeks after the annual meeting, the sum of 50 cents for each paid-up member as a membership in the National Bee-Keepers' Association for one year.

Sec. 2.—The Secretary shall receive not less than $10 annually for his services, and shall receive another sum equal to his legitimate expenses for the benefit of this Association.

Sec. 3.—The remaining funds of this Association shall be expended as the members thereof may direct.

ARTICLE VII.—Meetings.

This Association shall hold annual meetings at such time and place as the members may select by a two-thirds vote at some regular meeting; but if in any event it becomes impracticable to meet at the place selected, because of unforeseen events, then this Association shall hold its meeting at such time and place as the Executive Committee may select.

ARTICLE VIII.—Committees.

The President of this Association shall appoint yearly the following committees: On Resolutions and Petitions; a Program Committee of one; and such other committees as may become necessary.

ARTICLE IX.—General.

Section 1.—This Association shall ally itself with the Texas Farmers' Congress in every way possible, provided that such alliance is never detrimental to this Association.

Sec. 2.—It shall be one of the aims of this Association to secure the passage of a law establishing an "Experimental Apiary" at College Station, together with the appointment by the Governor of an experimenter, who shall be recommended to him by the Bee-Keepers' Association of Texas.

ARTICLE X.—Amendments.

This Constitution may be amended by a two-thirds vote of the members present at some regular meeting.

As Secretary of the Texas Bee-Keepers' Association, I wish to extend a cordial invitation to join our Association. Our membership includes the foremost and most extensive bee-keepers of the State. Our objects are, first, to learn as much as possible about the bees and how to secure the largest possible profit from them; second, to aid the beginner in bee-culture, and give him every possible assistance; third, to protect and look after the interests of our members at all times, and especially to secure suitable legislation which shall at all times protect the bee-keeper and his interests.

The beginner in bee-culture—the small bee-keeper—is by no means barred from membership in our Association; on the contrary, we welcome him heartily.

The Texas Bee-Keepers' Association holds its annual meeting each July at College Station, Tex., in connection with the Farmers' Congress. At this time very low rates are granted by all railroads of the State, and the trip to College Station is not only a pleasant recreation and vacation, but in the practical information gained many times repays the amount expended in the trip.

By this meeting once a year the bee-keepers are enabled to talk over all matters of interest, discuss new methods, and, in short, each man profits by the experience of all the others.

We feel certain you would enjoy and appreciate belonging to this Association, especially as the annual membership is but one dollar ($1.00) per year, and the only other requirements are that the applicant must be a white person and interested directly or indirectly in bee-keeping. This $1.00 membership fee also includes membership in the National Bee-Keepers' Association. The latter Association includes all the progressive and prominent bee-keepers in the United States and in Canada; is backed by ample funds, and looks after the interests of its members everywhere. For example, if a member of the National Association, who is a poor man, should be prosecuted for some alleged damage done by his bees, the National Association takes up the matter and fights his case in the courts, with the best legal advice and help that money can procure, and this without costing the bee-keeper a cent. The National Association also detects and prosecutes firms and individuals who adulterate honey or sell imitations of honey, thus keeping up the price of pure honey and thereby benefitting every bee-keeper.

In view of these advantages, do you not believe that $1.00 invested in membership to the Texas Bee-Keepers' Association would pay you? I assure you the Association will give you every assistance possible. Applications, together with the $1.00 membership fee, should be forwarded to the undersigned. We trust we may have the pleasure of enrolling your name as a member of the Texas Bee-Keepers' Association.

Louis H. Scholl.

(Continued next week.)

Report of the Chicago-Northwestern Bee-Keepers' Convention, held at Chicago, Ill., Nov. 30 and Dec. 1, 1904

(Continued from page 778.)

EXHIBITS AND PRIZES AT CONVENTIONS.

Mr. Swift—I don't want to shut off the wax-press discussion, but a matter has occurred to me that is entirely foreign. I have attended, now, I think, three or four of these conventions—I am not sure which—and this is the only convention I have ever attended where there is nothing in evidence of the object of the convention. You take the Fat Stock Show, and when they have their meeting they have their stock to see and judge; you take the meeting of the Horticultural Society, and the different associations throughout the United States and elsewhere, and they all have exhibitions of their products—something to judge by. The Chicago-Northwestern Bee-Keepers' Association have nothing but a bare room, and these charming (!) pictures to gaze upon, while you are listening to the words of knowledge that come. I think it would be a good idea to have something on the line of our work on exhibition here at the convention. Our Secretary-Treasurer has notified us we are woefully weak in the form of finances. If we join any more associations we probably won't have anything left. If it meets with the approval of the Executive Committee, I would like to make an offer of $10 to the Association for three prizes for the exhibition of honey at our next convention; $5 for the first, $3 for the second, and $2 for the third—say a dozen sections of comb honey, the quality and character considered, and I will myself be responsible for the premium, if that meets with the approval of the Association.

Pres. York—I think that is a very good idea, and if you wish to put it that way I think the Executive Committee will arrange for an exhibition next year; and if anybody else wishes to say they will give something, or give a premium for something else, we can have that.

Dr. Miller—I will take it out of the hands of the Executive Committee, and move that the offer be accepted with thanks.

Mr. Reynolds—I second that.

Pres. York put the motion, which was carried with applause.

Dr. Miller—I want to suggest one caution. I have been at conventions where we have had a great many things on exhibition, and Mr. Swift doesn't know the danger-point that lies in connection with that. One of the troubles about it was that in an adjoining room, or sometimes in the same room where these articles were on exhibition, the invariable result would be that there would be two or three, or half a dozen, people around those things looking at them and talking about them while the meeting was going on, and unless some steps are taken to prevent that, you are going to do more harm than good.

Mr. Swift—That is the reason I left it to the Executive Committee.

Pres. York—If we meet here next year we can have it *in front* of the convention.

Mr. Moore moved, seconded by Dr. Miller, that at 4 o'clock p. m. this convention adjourn to meet again next year. Carried.

SECOND DAY—Afternoon Session.

At 1:30 the convention was called to order, with Pres. York in the chair.

PROTECTING HIVES FROM SUN HEAT.

"Should hives be protected from the heat of the sun? If so, what is the best method?"

Mr. Hutchinson—I think where you are producing comb honey, and the heat drives the bees out of the supers, it is an advantage to have the hives shaded. I don't know of anything better than a movable board. You can make a very cheap "board" out of shingles by having a piece across the center of each, and you may nail the butts of the shingles together and make a shade-board 2 by 3 feet. Have the hive face either east or west, and lay that board on top of the hive.

Mr. Kimmey—When it gets hot enough to drive the bees out of the super, you say. Do you know that it ever does

Mr. Hutchinson—Yes.

Mr. Kimmey—Some one has told us if the hives are open; Mr. Doolittle has said there was no need of opening them at all.

Mr. Hutchinson—It depends upon the location. If the hives are standing in a close place, where the sun could beat down and no breeze pass over, that would make a great difference. If they stood out on a hill where the breeze could blow over, that would make a great difference.

Mr. Meredith—A gentleman I have some dealing with in the bee-business recommended planting grape-vines; that lets the heat of the sun directly on the hives before the leaves come out, and after the leaves have fallen in the fall, and it gave them shade protection in the summer, using the Clinton grape more on account of its prolificness.

Mr. Snell—I think the matter of shade depends largely upon location, as Mr. Hutchinson said; where the apiary is surrounded by a good deal of wind-break the air is more suffocating, and the hives in that case will need shading; where, if they stood out in more of an open place, where there is more circulation of air, they would not become heated up enough so that the bees would cluster out very much and desert the supers.

(Continued next week.)

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Hay-Rack for Hauling Bees

Heretofore our bees have been hauled to and from the out-apiaries by means of a rack especially made for the purpose, this rack being placed on a common farm wagon. This fall, instead of this special rack, a common hay-rack was used, covered with boards so as to make a level floor, blocks being tacked down to keep the hives apart. Four hives are placed abreast, the frames running from side to side.

There are two advantages over the old plan. One is that there is not the trouble of keeping a special rack from year to year that has no other use but to haul bees. Hay-racks are always to be had, and the heavy springs can be added. The other advantage is, that instead of 31 hives being hauled at a load, as with the bee-rack, 59 hives can be hauled on the hay-rack.

◆

Fastening Down a Bee-Veil

I want to tell the sisters about fastening a veil in a very simple and easy manner, the plan, so far as I know, being original "in this locality."

Nothing unusual about the veil itself, just a bag open at each end, one end sewed to the rim of the hat and the other with a rubber cord run through the hem. A safety-pin caught through the edge in front is pinned to the waist. In that pinning lies the whole secret of success. If pinned loosely, or even what would ordinarily be called tightly, there will be opportunity for bees to get under when you are stooping over. But it must be made *very tight*, so that no matter what position you may take there will be no loose place for bees to crawl under.

Try it, and you will find how easily it is done, and how effective it is.

◆

Poor Report—But Still Hoping

Dear Miss Wilson:—You asked all the sisters to send in their reports, let it be good or bad. I will send in mine, but it will be *very* bad.

Last spring I had 80 colonies in pretty good condition. The honey crop here was a failure. I got about 150 sections of honey of very poor quality, quite dark. This is the first time I have had an entire failure since I have kept bees. I have always gotten some surplus, if it was only 500 or 600 sections.

I have had to feed the bees this fall for the first time in my experience. I have now only 68 colonies, the moth taking 2 or 3, and I doubled up some. I am living in hopes that next year will be better.

(Miss) L. C. Kennedy.

Sangamon Co., Ill., Oct. 27.

From 80, spring count, to 68 in the fall, with 2 sections of poor stuff to the colony—well, that certainly may be classed as something of a failure. But failures have their uses, too. The successes of future years will always seem just a little brighter for having the failure of 1905 as a background. And there is the true spirit of a bee-keeper ringing out in that last sentence—"I am living in hopes that next year will be better."

Miss Kennedy deserves thanks for her report. Somehow it is always easier to chronicle success than failure. But in one respect the poor reports are of more use than the good ones. "Misery likes company," and we can condole with one another in our failures; and, besides, those who have done well, or fairly well, will feel the more grateful for their success in the midst of failures.

Please let us have reports, sisters, whether of failures or successes.

Bees and Grapes in Indiana

Considerable has been said about bee-keepers educating the public through communications to the local press, and at least one of the sisters has been doing some practical work in that direction. The Sun-Telegram, of Indiana, contains a well-written article from the the pen of Mrs. Helen V. Austin, replying to the sensational statement that over one-third of the grape crop of Indiana had been destroyed by the bees, and that the damage had been confined to that State alone.

To some bee-keepers such statements may seem too silly to merit reply. But not too silly for many people to believe. A sample of what unreasonable things people may believe is thus given by Mrs. Austin:

> "An individual undertook to explain to me how it was possible for a bee to puncture a grape. A vague idea was doubtless wandering through his brain of the legend of the Plum and the Curculio. His notion would convulse a bee-keepers' association and cause our Uncle Sam's department of entomology to invent a new bug. Tell it not in Gath, but he said the bee punctures the grape with its sting! 'When ignorance is bliss, it were folly to be wise,' just about the time that the bee convinces this 'foolish Callatian' that the utter and only use and purpose of her sting is for self-defense."

Some of the people in the region where the Sun-Telegram is published will no doubt change their views after reading Mrs. Austin's article.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

"Pound" Sections to Weigh a Pound.

L. V. Ricketts is working at a good matter—trying to have pound sections actual pounds. Wish I could fall into his procession; but I fear uniformity of weight is impossible. With me occasional ones are over one pound weight now; and increase of size will bring more of them. It's not easy to get any pay for one or two ounces of extra weight in a section. Hardly right to balance off extra-weight ones against scant-weight ones in the same case, and so push the difficulty onward to the grocer. Every once in a while some one agitates for *decreasing* size. I rather think, Mr. R., that to stand firm against decrease is about the best we can do under the circumstances. Page 695.

Fumigating Comb Honey.

So Comrade Greiner finds that an ounce and a half of bisulphide of carbon is too little to kill the "varmints" in a stack of five sets of combs—and kicks about it—and threatens to go back to sulphur. He has found 2½ ounces of sulphur plenty, and perhaps more than a plenty, for the same-sized stacks. Shouldn't wonder if he was right. Page 695.

Why Foul Brood Affects the Larvæ.

An idea of Mr. Dadant's, on page 696, is worth thinking of a second time. That the reason why larvæ take foul brood while adult bees do not, is that the former have as yet no poison, while the latter carry a big dose of a powerful and sufficient antidote. I don't feel positive that poison in the sac provided for it has any effect on the tissues outside. May be it does, however. In fact, it is pretty certainly brought into existence outside before it is put in—and the process may be going on most of the time—with more or less of the chemical escaping into the regions round about.

MARY'S COSTLESS "HIVES."

There, now! The hives that Mary had didn't cost a cent, and the hive-trust is going to be totally unable to say anything about prices. Page 682.

THINGS THAT AFFECT THE NECTAR-FLOW.

Hot and cold, wet and dry, wind and calm, are the things mostly thought of in connection with the nectar-flow, or non-flow. But we are a little foolish if we get spunky about it when these manifestly fail to account for the case. Lots o' more things in heaven and earth, Horatio—some of them easy to see, probably some elusive and hard to see. The amount of ozone present in the atmosphere varies greatly, I understand. I think the honey-flow is better when the amount is large, poorer when the amount is small. Also better when the barometer is falling, poorer when it is rising; better when there is some haze in the sky, poorer in brilliant sunshine; better when the breeze is up the slope of the land, poorer when the breeze is down the slope. I may be quite wrong in some of these. East wind has very manifest peculiarities of its own; I'm pretty sure it affects our surplus somehow; but I am not ready to say how much, or how. Possibly also the shine of an unspotted sun affects delicate matters in a different way from the shine of a sun with lots of spots big and small upon its face. Page 677.

LARGE APIARISTS AND BLACK BEES.

D. M. M. *was* a little bold to refer to many of our large apiarists as champions of the blacks. But was not G. W. Y. a little bold also in calling for *one?* I don't think them better, on the whole, than a good strain of black-Italian hybrids—especially don't think them better for extracted honey—but I do rather think them better for comb honey; albeit I greatly dislike their style of running when handled. One may refuse to keep certain bees because of disagreeable peculiarities, and at the same time claim that they are really the best bees. Page 677.

CRUSHED DRONES FOR APIFUGE.

A provoking "out" makes me trouble again. Don't know exactly whether the printer man perpetrated it or whether I did it myself in copying. On page 732, about crushed drones for apifuge, read it, "Queer that the juice of alien drones [should infuriate bees when the drones] themselves would be unnoticed." The words in brackets turned up missing before.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to DR. C. C. MILLER, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Unfavorable Experience with Chaff Hives

I have 30 well-made 8-frame Simplicity chaff-hives, double-wall, with chaff between at sides and bottom. I have had these hives 2 years. Bees die in them worse than in any other hive; also, I get scarcely any surplus honey in them. Some colonies don't gather enough to winter on. What is the trouble? The chaff is well packed between the two walls, and stays there at all times. The super goes off and on as wanted. The hive has an outside protection. WISCONSIN.

ANSWER.—I don't know what is the trouble. Some claim that the packing prevents the bees getting the immediate benefit of the sun shining on the walls of the hive, thus hindering successful wintering, and if they come out poor in the spring of course that affects the surplus work.

What More to Read

I get the American Bee Journal, Gleanings in Bee Culture, have read "Langstroth on the Honey-Bee," and have "A B C of Bee Culture" and "Forty Years Among the Bees" almost "by heart." Now, what would you and Miss Wilson advise me to read during the long evenings the coming winter?

ILLINOIS.

ANSWER.—I went into the kitchen where Miss Wilson was trying to turn cream into butter in an ice-cream freezer, and referred your question to her, saying, "What do you advise?" She stopped her intolerable racket long enough to say, "I think he's pretty well up." Then, after whirling the crank a few times, she added, "He hasn't Cook's book." A good suggestion. More than the other text-books, Prof. Cook's "Bee-Keeper's Guide" goes into the natural history of the honey-bee from the standpoint of an Entomologist, and although it may not make much difference as to the number of pounds of honey you get, it will heighten your enjoyment in bee-keeping to understand more about how a bee is put together. Then, if you want to go more fully into that part of bee-lore, you can get Cowan's excellent little work, or Cheshire's larger one. Then you might get sample copies of the other bee-papers, and perhaps som of them would interest you.

But there's something else you can profitably do aside from reading, and I suspect you are already practicing it without my telling you—just shut your eyes and think—planning out what you're going to do the coming year. Some will tell you that you can do that better with a pipe in your mouth. Don't you believe it. Your thinker will work more clearly without any such fumigation.

Questions on Management

Adrian Getaz, in his article on "Bee-Keeping on a Large Scale" (page 727), says R. C. Aikin's plan is similar to Messrs. Elwood's and Hetherington's, except in one respect—when they remove the queens they take one or two combs with each, and form as many nuclei. Then 16 days after removal each queen is returned to her former home.

1. What becomes of the nuclei?

2. He furthermore says, "During May some colonies will get so strong that they might swarm. To all such an additional story is given under the brood-chamber. When the flow comes, the additional stories are removed." Does he remove the same one he gave them, or the one they had before giving the additional one? If he removes the one he gave, does it have brood in it? If so, what is done with that brood? If he removes the one they had, doesn't it contain honey? If so, isn't that honey dark when extracted?

DELAWARE.

ANSWERS.—1. I don't know for certain what is done, but I can tell you what might be done. Generally some increase is desired, and these nuclei may be continued where they stand and be built up into full colonies, the queen alone being returned to the old colony, or taken with one or two frames of brood, according to the strength of the nucleus. If it is not desired to continue the nucleus, the whole business may be returned with the queen to the old colony, leaving the field-bees of the nucleus to shift for themselves. Not being very numerous, it doesn't matter such a great deal where they go, and as they return laden from the fields they will be kindly received wherever they attempt to enter. If, however, you are anxious that the whole force shall return to the old hive, you can take a plan that has worked satisfactorily with me. Put your nucleus on the top of the old hive, but of course with no communication below. Then when this upper hive is taken away and its contents returned below, the field-bees of the nucleus will, upon their return from the fields, settle upon the cover of the hive, as nearly as they can on the spot where their home was, and after some consultation they will form a line of march down to the entrance and peaceably unite with the colony below.

2. It doesn't matter whether the upper or the lower story is left, the probability being that into whatever story is left there will be put the best frames of brood selected from both the stories. The frames being well filled with brood, of course there will not be any trouble about what honey may be left. The frames of brood taken away can be used wherever needed, chiefly in building up weak colonies or nuclei, or in forming new colonies.

Reports and Experiences

Several Things Endorsed

I endorse the Alexander plan of increase, and the Townsend method of producing comb and extracted honey in the same super, because I originated and practiced these methods successfully before I ever saw them in print. Both methods are conducive to less swarming, and more and better quality of honey.

I also endorse the rules the Australian Bee Societies have made in regard to protecting priority rights. I wish such rules were a written law in this country. No apiary can be less than 3 miles from another without the bees trespassing more or less on each other's territory. Of course, if such a rule were to be made a written law, it should not prevent farmers or others who own sufficient land from keeping enough colonies to stock their land if they so desired. I have "figured out" that if 100 colonies will stock a 1½-mile radius, one colony will stock 45¼ acres. Of course, this is "on an average," and might not be exactly fair to the "favored spots," but, then, things like this would best be worked on an average, even if it did pinch some "favored spot" land-owner.

Tattnall Co., Ga. H. C. BARNARD.

Worst Year for Bees

This has been the worst year I ever knew for the bee-men in Indian Territory. I didn't get a pound of surplus honey from 300 colonies. Still, I am not discouraged. I am hoping for better times next season. Greatest success for the "Old Reliable."

J. T. HAIRSTON.

Dist. 5, Ind. Ter., Nov. 3.

Report from Southwest Texas

I live in the center of southwest Texas, adjoining the famed Uvalde County, which is located on a railroad, hence its known fame as a heavy honey-producing county. But this vast stretch of country is sparsely netted with railroads, and we of Dimmit and other counties are ahead of Uvalde from an individual bee-keeper's standpoint. We have the same flora, and not its reputation, hence with Uvalde's railroad facilities, and its heavy honey-producing record, which we, who loaded with wagons from adjoining counties, go to Uvalde and sell or ship from there, give it a reputation which has resulted in that county being settled up with bee-keepers. But that is but one, and there are several counties, with hundreds of locations, a beautiful climate, no snow, no wintering troubles. I leave my bees with 3 and 4 deep supers on the hives the winter through, with bottom-boards raised all around. I haven't time to do otherwise. If I have time, I go fishing, deer-hunting, duck-hunting, or quail-sniping. The people are free and easy. Time is the cheapest thing in Texas—that is, southwest Texas.

"Ah," you say, "I would get more honey if I wintered my bees in but one tight super." I don't know. I averaged 41 pounds per colony of bulk comb in the poorest season we ever had this year, and got 8½ cents per pound for the lot, spot cash. We never have to find a commission man who is honest; our merchants have car-lot customers always waiting for our honey.

Our fall flow this year was great. The bees entirely ignored broomweed—there were too many other good honey-producing plants in bloom, and they reared considerable brood this fall. The honey-flow is still on, and will continue till frost; as the bees will work on the broomweed later.

I have "other fish to fry"—onion culture. I have 3 tenants and my own acreage to attend to, and I attend to my bees but once a year; I attend to swarming, and when that is over (and that is always before the honey-flow ceases, and never after) I take the honey off, and sell the whole product, and don't bother the bees, or they me, till swarming-time again.

Oh, yes, I do have a few empty hives in the fall, and turn their combs into beeswax, but as the weeds are continually blooming all through the summer and fall in this irrigated country, the bees contrive to have brood all the time to rear a queen from.

You bee-men who love sunshine and good returns, no wintering troubles for man, bee, or beast, go to southwest Texas. If you love to hear a railroad whistle or street-car, stay where you are. CHAS. POLLARD.

Dimmit Co., Texas, Oct. 25.

One of the Cleanest Papers

While I haven't a bee in the world, I may have some time, and want to keep abreast of the times. I consider the "old reliable" American Bee Journal one of the cleanest papers I ever read; so you may continue to send it until I order it stopped.

McCracken Co., Ky. T. F. MCCORKLE.

Report for Season of 1905

I had 24 colonies of bees, spring count, and now have 46. I took off 983 full sections of honey, and 18 frames for spring feeding, weight 96 pounds. I also extracted 67 pounds from partly-filled sections. E. S. BARBER.

Erie Co., N. Y., Nov. 6.

"Combed" and "Extracted"

Second-Hand Square Oil-Cans for Honey

As we have stored and sold from 4 to 8 tons of honey per year for the past 16 years in such cans, without a word of complaint, so far as we know, perhaps our experience will be worth something to the fraternity.

While on this subject I may as well give our whole system of handling this class of cans, as I believe it will prove a great economy in the hands of *careful* bee-men of the West. The high freight-rates on goods as bulky as 5-gallon cans cased is prohibitive to the use of new cans. We people of the West, in order to play even, in a measure, with the Standard oil people, and the railroads in some way, for making our oil cost us 40 cents per gallon instead of 12 cents, as in Ohio, *have* to use their cans and cases for our honey.

We use all the gasoline cans we can get hold of, as they are more easily cleaned; but we also use all the kerosene-cans we get, as well.

I have an old scavenger, or a "raggedy-raggedy man," who gathers my cans for me in a local mining town. I pay him 5 cents each for his trouble of collecting and holding them until I go for them. I sometimes bring home 120 in a load.

REPAIRING CANS.

When we are ready to make a job of soldering, we remove the oil-caps on the cans by holding them over a hot blaze in our soldering fire-pot, until the solder starts, which operation is quite rapid with a good fire. Next we patch any vent-holes found, and solder on the screw-caps. Last year we got screw-caps from the American Can Co., with 1½-inch mouths and 2-inch base, which exactly fits the cans, and is a good size to fill into. When we find a can with its sides collapsed so that its capacity is small, after soldering it, we straighten it by exploding 1 or 1½ drams of rifle-powder as near the center of the can as we can hang it. It straightens them in a hurry. Tie the powder in a small cloth around one end of a blasting-fuse about 8 inches long; cut a gash in the fuse near the other end, and put in a few grains of powder to "spit" the fuse quickly. Insert this cartridge into the opening in the can the proper distance to bring powder near the center of the can; secure by tying a string to a ring on top of the can. "Touch the button" with a match, and the powder does the rest.

Cans thus treated may not case well for shipment, but are as good for storage for local use as any. A few experiments will teach you the amount of powder to use for different conditions of cans.

CLEANING THE CANS.

The method we have found the most satisfactory in rapidity and thoroughness is to make a solution of strong soap-suds by slicing up not less than two bars of some good laundry soap (without rosin in it is preferable) to a barrel of water. Add to this not over half a can, or about ¼ pound, of concentrated lye. We can throw a steam-hose into the barrel, and boil until the soap is dissolved. We use a funnel made with the small end a little smaller than the size of the opening in the cans, to allow for expansion of the cool air in the can, and to prevent the hot suds from being blown back in your face while pouring into the cans.

We have a ¾-inch pipe running from the steam-dome of our boiler so we can get dry steam. This pipe has a perpendicular length sufficient to reach to the bottom of a can, with a valve within convenient reach of your hands. Insert this pipe in a can containing the hot suds, until the lower end of it reaches within about ½ inch of the bottom. Suspend the can in this position by a hook fastened into the ring on the can. Open the valve and let in steam enough to boil the suds, and throw it all over the inside of the can. We boil one can and fill another ready to boil, and rinse out the boiled can. We always rinse with two waters—the first time with clean hot water; the last, clean cold water. With this system one active person can clean 100 or more per day.

After draining these cans they are laid in a hot, sunny place on their sides, with the opening nearest the top, to allow the remaining moisture and any odors to escape freely. We clean cans in hot, sunny weather, as the sun is the most effective and convenient form of heat we have found for the volatilizing of the oil odors. We have found the use of concentrated lye in too strong a solution to be unwise. Try a strong solution of it on bright tin, and you will observe that it has a very corrosive effect. Cans thus treated are at once attacked by the acid in honey, discoloring and injuring the flavor of the honey. We leave our cans in the sun about a week, if we are not needing them, then go over them in the heat of the day, when they are hot, and we can easily pick out any doubtful ones by the odor, and leave them for a few days longer. When sunning does not remove the odor, another suds treatment may hasten the cleaning.

Where access to a steam-plant is not possible, the same results can be obtained by the thorough shaking of the hot suds and a longer sunning.—L. B. BELL, of Arizona, in Gleanings in Bee Culture.

Please mention Bee Journal when writing Advertisers.

The Money Breed

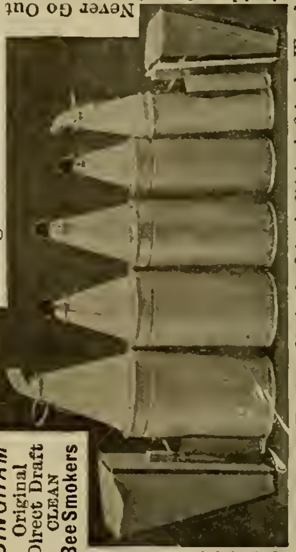
What breed of beef cattle makes most money? Dr. Walter J. Quick of Indianapolis, Ind., will discuss this subject in the November issue of that widely read, authoritative paper

BLOODED STOCK

This issue (November) will be devoted entirely to Shorthorns and Beef Breeds. You're out for money. Then subscribe for BLOODED STOCK. Just 25c for 12 months. You can afford 25c. Why, this number will be worth one hundred times that in advice on buying, breeding, feeding, housing, fattening and marketing. Subscribe now. The December issue will be devoted to "Winter Care of Stock."

Blooded Stock, Box 221, Oxford, Pa.

Mention Bee Journal when writing.



4 Largest Sizes Soot Burning

And last from 5 to 21 years

Never Go Out

BINGHAM Original Direct Draft CLEAN Bee Smokers

Pat'd 1878, '82, '92 & 1903

Tin 4-in. Smoke Engine $1.50. 3½-inch $1.10. 3-inch $1.00. 2½-inch 90c. 2-inch Wonder 65c—per mail.

Sent on receipt of price per mail.

T. F. BINGHAM Farwell, Mich.

OTISVILLE, PA., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. FRED FODNER.

Mention Bee Journal when writing.

The Emerson Binder

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 75 cents; or we will send it with the Bee Journal for one year—both for only $1.50. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

GEORGE W. YORK & CO.,
334 Dearborn Street, CHICAGO, ILL.

THIS IS THE 'PHONE FOR FARM FOLKS

In selecting a telephone for the farm line remember that repairs and tinkering cost money and waste time. Use the same judgment that you would in buying a reaper. The cheap telephone, like the cheap harvester, is out of service most of the time. Its talking qualities are not lasting; it soon gets weak, and is liable to cause you trouble all of the time.

Stromberg-Carlson Telephones

are the standard make for rural lines. Other manufacturers claim their instruments are as good—they like to compare theirs with Stromberg-Carlson—but TIME will not bear out their claims. To avoid trouble, expense and disappointment, pay the trifle more and get the telephone with a reputation. Buy the Stromberg-Carlson—you buy satisfaction. Free book, 80-D, "How the Telephone Helps the Farmer," tells a lot of reasons why it's the phone to buy; gives full description of every part and piece of a telephone; tells how it's made and illustrates where it's made. Write for the book today. Address

ROCHESTER, N. Y. STROMBERG-CARLSON TELEPHONE MFG. CO., CHICAGO, ILL.

Mention Bee Journal when writing.

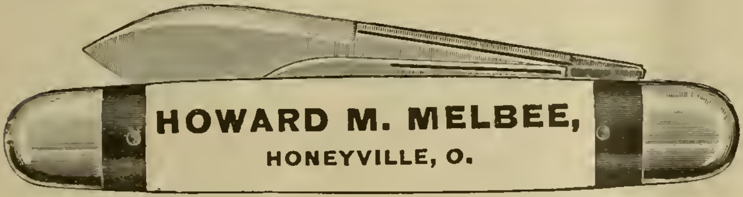
We Sell Root's Goods in Michigan

Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.

M. H. HUNT & SON,
Bell Branch, Wayne Co., Mich

"It is continuous advertising that impresses the public with the stability of a firm."

American Bee Journal
Novelty Pocket-Knife
Gold Fountain Pen
All for $2.75



(This cut is the full size of the Knife.)

⅔ size

Worker

Queen

Drone

NOVELTY POCKET-KNIFE

(Name and Address on one side—Three Bees on the other side.)

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the owner, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. It will last a life-time, with proper usage.

Why Own the Novelty Knife?—In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and, in case of death, your relatives will at once be notified of the accident.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or club the Novelty Knife and the American Bee Journal for one year—both for $2.00. (Allow two weeks for Knife order to be filled.)

SOLID GOLD FOUNTAIN PEN

Finally, we have found a good Fountain Pen that is reasonable in price. The manufacturers of this pen say that if you pay more than $1.25 for other fountain pens, it's for the name.

This pen is absolutely guaranteed to work perfectly, and give satisfaction. The Gold Nibs are 14 kt., pointed with selected Iridium. The Holders are Para Rubber, handsomely finished. The simple feeder gives a uniform flow of ink. Each pen is packed in a neat box, with directions and Filler.

We mail this **Gold Fountain Pen** for only $1.25, or for $2.00 we will mail it and the weekly American Bee Journal for a whole year.

☞ Sample copy of the American Bee Journal free; trial trip of three months (13 copies) for 20c; regular yearly price, $1.00. Address all orders to

GEORGE W. YORK & CO., 334 Dearborn St., Chicago, Ill.

CONVENTION NOTICES.

Illinois.—The 15th annual meeting of the Illinois State Bee-Keepers' Association will be held in Springfield, on Tuesday and Wednesday, Nov. 21 and 22, 1905, in the room of the Board of Supervisors in the Court House. The R. R. Rates will be as follows: All lines in the Western Passenger Association will make an open rate of one fare plus 25 cents for the round trip to Springfield, except from near points where a fare and one-third would be less. All lines in the Central Passenger Association will make a similar rate on the Certificate plan, and if not convenient for any attending our meeting to come over the lines in the Western Association, if they will write me I will send them certificates which the Grand Secretary of the I.O.O.F. assures me your local secretary of the same order will gladly sign. The Central Passenger Association Lines are as follows: B. & O. S.-W.R.R.; Big Four Route; C.& E.I. R.R.; C.H.&D.R'y; I.,I & I.R.R.; J.& St.L. R'y; L.E. & W. R. R.; L. & N, R. R.; Southern R'y (St. Louis Div.;) T., P. & W. R'y; T., St. L. & W. R R.; Vandalia Line; Wabash R. R., east of Tolono.

The good results of this annual bee-meeting rest on the members who attend it. Our State gives us an appropriation to publish our report and to suppress foul brood, and it is the duty of every bee-keeper of the State to have a voice in the manner in which this appropriation is used. All bee-keepers are invited to come, and bring their wives. The railroad rates will not be higher than an open rate of one fare and a third for the round trip, and efforts are being made by our Odd Fellow friends to secure a one fare for the round trip. Good hotel accommodations can always be had at reasonable rates. JAS. A. STONE, Sec.
Route 4, Springfield, Ill.

Ontario.—The annual meeting of the Ontario Bee-Keepers' Association will be held in Toronto, Nov. 15, 16, and 17, 1905. The Fruit, Flower, Honey and Vegetable Show will be held Nov. 14 to 18, which is a new venture in its second trial, but we look for a good show. WM. COUSE, Sec.
Streetsville, Ont.

The Chicago-Northwestern Bee-Keepers' Association will hold a social session at the Revere House, Dec. 19, 1905, at 10 a.m. At 2 p.m. the same day will be held the regular annual election of officers. Any other business coming before the meeting will be attended to. All who are accustomed to paying their dues to our Association, thereby getting two memberships for the price of one, will please hand the $1 to the secretary, or mail it to him as usual. The time in the evening will be given to the National, as will also the whole of the two following days. Every one is cordially invited to be present, both at the short sessions of the Chicago-Northwestern, and at the 7-session meeting of the National Association. HERMAN F. MOORE, Sec.
Park Ridge, Ill.

N. B.—Any one paying their dues to the National Association *direct*, will have to pay another dollar to the Chicago-Northwestern, if it is desired to become a member of the latter organization also. Hand your dues to H. F. Moore, the Secretary. H. F. M.

DEATH TO LICE.

LICE SAP LIFE

That's how they live and thrive. You can't have healthy, profitable fowls or stock and have lice too.

Lambert's Death to Lice

promptly kills all insect vermin and makes sitting hens comfortable. Sample 10c; 100 oz., $1.00 by express.

O. K. STOCK FOOD CO.,
D. J. Lambert, Vice-Pres.
406 Monon Bldg., Chicago, Ill.

Mention Bee Journal when writing.

Now is the Time to Order

Your Bee-Hives, Sections, Shipping-Cases, Berry Boxes, and Crates for the coming season. By sending us a list of goods wanted, we can save you money.

SHEBOYGAN FRUIT BOX CO.
35A18t SHEBOYGAN, WIS.

Mention Bee Journal when writing.

Best Goods in the World

Best Bee-Hives, Sections, Comb Foundation, and everything the bee-keeper needs. Now is the time to buy for next season's use. **Lewis' Goods at factory prices.** Catalog free. Cash orders at catalog prices on such goods as mentioned in special list.

Before November	9 percent discount	Before February	6 percent discount
" December	8 " "	" March	5 " "
" January	7 " "	" April	3 " "

Ask for special list now, free.

Honey-Packages for Marketing Honey

Such as Shipping-Cases, Tin Cans, Buckets. **Glass Jars with patent spring sealers and glass stoppers;** regular Glass Fruit-Jars, etc. Sample cases for sending samples of extracted honey by mail. Special prices on Glass Honey-Jars and Tin Buckets.

New Crop Extracted Honey

We have an abundance of the finest honey in the world. Can ship in cans and barrels. If you can't supply the demand in your locality write to us at once and tell us how much you can use; 10 cents for sample by mail, but we return the 10 cents with your first order.

Paint for Houses, Barns and Roofs

We can furnish any quantity of any grade of paint on short notice. Special prices on absolutely pure paint. Let us quote on paint for your house.

Write to-day and tell us what you want in our line, and how much. **Best service, lowest freight rates, satisfaction to all.**

C. M. SCOTT & CO. 1004 EAST WASH. STREET INDIANAPOLIS, IND.

Mention Bee Journal when writing.

For Sale—25,000 Lbs. of well-ripened Spanish-needle Extracted Honey put up in new 60-lb. tin cans—6c a pound for the lot, or 6½c for less, **F. J. GUNZEL, Weiner, Ark.**

44Atf Please mention the Bee Journal.

FOR SALE

Extracted Honey—Fancy white, 7c; fancy amber, 6½c; ¼c less in 5-case lots or more.

C. C. CLEMONS & CO
45Atf KANSAS CITY, MO.

Mention Bee Journal when writing.

Big Discounts on Bee-Supplies

The following discounts apply on all orders except honey-packages for current use:

For cash orders before Oct. 1—10 percent

Nov. 1	9 percent	Feb. 1	6 percent
Dec. 1	8 "	March 1	4 "
Jan. 1	7 "	April 1	2 "

We handle **LEWIS' GOODS**, and carry a large stock, which insures prompt shipment. Catalog free. Address,

LOUIS HANSSEN'S SONS,
213 & 215 W. 2d Street, DAVENPORT, IOWA
38Atf Please mention the Bee Journal.

Glass Jars for Honey

We can ship by **return freight** at the following prices:

½-lb. Jars with corks—1 case of 21 doz. for $5.50; 3 cases, $15.50.

¾-lb. Tiptop Jars—1 case of 14 doz., for $5.25; 3 cases for $15.

1-lb. Tiptop Jars—1 case of 12 doz., for $5; 3 cases for $14.

Second Hand... Comb Foundation Mill

We have for sale a 6-inch Second-Hand Comb Foundation Mill. Used scarcely any; good as new. If interested write for price.

YORK HONEY AND BEE SUPPLY CO.
(Not incorporated)
141 Ontario Street, - CHICAGO, ILL.

DEATH TO LICE.

LOSS BY LICE

on poultry amounts to many times the cost of **Lambert's Death to Lice**—the sure preventive. Loss can be saved and profit made by its use. Frees sitting hens from lice without harming eggs or chicks. A trial 10c box will prove it. 100 oz., by express, $1.00.

O. K. STOCK FOOD CO.,
D. J. Lambert, Vice-Pres.
406 Monon Bldg., Chicago, Ill.

Wisconsin Basswood Sections

And Prompt Shipments

Is what we are making for our customers.

— DOVETAILED HIVES AND SHIPPING-CASES —

We carry a full line of SUPPLIES. Ask for Catalog.

THE MARSHFIELD MANUFACTURING CO., Marshfield, Wis.

8 Percent Discount

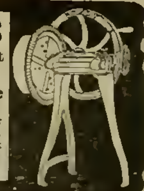
We will allow you the above Discount on all Orders accompanied by Cash during November. Send for our Catalog.

PAGE & LYON MFG. CO., New London, Wis.

GET A DANDY

BUSHELS OF EGGS follow the feeding of cut bone. The **DANDY** Green Bone Cutter is the simplest, fastest and easiest bone cutter made Price $5.00 up. Sold on 15 days trial. Satisfaction or no sale. Send for price book and *Special Proposition.*

Stratton Mfg. Co., Box 21, Erie, Pa.



WANTED

Fancy White Comb Honey in Non-Drip Shipping-Cases; also White Clover Honey in cans and barrels. Please send samples and state your lowest price, delivered here. We pay **spot cash** upon receipt of goods.

GRIGGS BROTHERS
521 Monroe Street. - TOLEDO, OHIO.
41Atf Please mention the Bee Journal.

FOR SALE HONEY-JARS

The No. 25 Honey-Jar, Porcelain Cover, Metal Screw Cap, absolutely tight, holding One Pound of Honey, Net, in shipping-cases of one gross each:

1 gross lots	$4.50 per gross
5 " "	4.00 "

Also in strong **RE-SHIPPING CASES** of two dozen each, heavy corrugated partitions, sides, top and bottom—a perfect protection—

1 case lots	$1.00 per case
5 "	.95 "
10 "	.90 "

Eight-ounce Tumblers, tin caps, 3 dozen in re-shipping case:

5 case lots, per case, 3 doz	85c
10 " " "	80c
20 " " "	75c

F.O.B. New York. Prompt shipment on receipt of order.

HILDRETH & SEGELKEN,
265 & 267 GREENWICH ST., NEW YORK, N. Y.
11Atf Please mention the Bee Journal.

The Rietsche Press

Made of artificial stone. Practically indestructible, and giving entirely satisfactory results. Comb foundation made easily and quickly at less than half the cost of buying from the dealers. Price of Press, $1.50—cash with order. Address,

ADRIAN GETAZ,
45Atf KNOXVILLE, TENN.

☞ J.G. Goodner, of this State, writes me that he "prefers to pay $25 for a Rietsche Press than do without it."—A. G.

12.80 For 200 Egg INCUBATOR

Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day

GEO. H. STAHL, Quincy, Ill.

44A26t Please mention the Bee Journal.

HONEY AND BEESWA

When consigning, buying or selling, consult

R. A. BURNETT & CO.,
199 SOUTH WATER ST. CHICAGO, ILL.

For Thanksgiving Day

the Nickel Plate Road will sell tickets, within distance of 150 miles, Nov. 29 and 30, at rate of a fare and a third for the round-trip. Return limit Dec. 4. Three through trains daily to Ft. Wayne, Cleveland, Erie, Buffalo, New York, Boston and New England points. No excess fare charged on any train on the Nickel Plate Road. Standard equipment on all trains. Meals served in Nickel Plate dining-cars, on American Club Meal plan, ranging in price from 35 cents to $1.00; also service a la carte and Mid-day Luncheon 50 cents. Chicago depot, La Salle and Van Buren Streets, on the Elevated Loop. Telephones, Central 2057 and 6172. 36—46A2t

Lowest Prices

Big Discount for Early Orders

On Cash Orders

Before November 1.................9 percent
" December 1.................8 "
" January 1.....................7 "
" February 1.................6 "
" March 1.......................4 "
" April 1.........................2 "

Bee-Supplies

OF ALL KINDS

Established Nearly 25 Years

We have published THE AMERICAN BEE-KEEPER for 15 years (monthly, 50c a year.) The largest and best illustrated magazine of its kind for the price published. Edited by two of the most experienced bee-keepers in America.

Sample copy free.

Our large, illustrated Price-List of Supplies free on application. Address,

The W. T. Falconer Mfg. Co.
JAMESTOWN, N.Y.

Mention Bee Journal when writing.

Headquarters for Bee-Supplies

ROOT'S GOODS

At Root's Factory Prices

Complete stock for 1905 now on hand.
Freight rates from Cincinnati are the lowest,
ESPECIALLY FOR THE SOUTH, AS ALL FREIGHT NOW GOES THROUGH CINCINNATI.

8 Percent Discount

For Cash Orders Received in

NOVEMBER

This applies to all goods with exception of Shipping-Cases and other Honey-Packages for current use.

C. H. W. WEBER CINCINNATI ...OHIO...

Office and Salesrooms, 2146-48 Central Ave. Warehouses. Freeman and Central Aves.

Honey and Beeswax

CHICAGO, Oct. 5.—The demand for comb honey is about as usual for the season of year. Offerings from the surrounding States are fully equal to the past season, but that from Colorado and the Middle Western States are not. No. 1 to fancy white comb honey sells at 13@14c, with an occasional sale at 15c; the off grades embracing crooked combs, etc., sell at 11@12c; amber grades difficult to place at 9@10c. Extracted, white, 6@7c, according to kind, body and flavor and package; ambers 5½@6½ cents. Beeswax selling upon arrival at 30c if clean; off grades about 2c per pound less.

R. A. BURNETT & CO.

KANSAS CITY, Oct. 9.—The honey market here at present is very strong at $3.25 per case for No. 1 and fancy white comb in 24-section cases; amber and other grades selling for less according to quality. Extracted in good demand at 6½c. Beeswax, 28c.

C. C. CLEMONS & CO.

CINCINNATI, Oct. 6.—Reports from differex parts of the country give evidence of an almost total failure in the comb honey crop, excepting the points in the North. We are selling this Northern comb honey at from 14@16 cents per pound, by the case. The demand for extracted honey is about equal to the receipts, which are good. We continue to sell amber in barrels at 5¼@6c; white clover at 6½@7½c. For beeswax we are paying 30c per pound, cash, delivered here.

(We wish to call the attention of the producer to the above honey quotations, who mistakably expects to receive these prices for his product. The above are our selling prices.)

THE FRED W. MUTH CO.

TOLEDO, Oct. 17—The honey market remains firm, with good demand, and prices the same as last quotations. Fancy white comb brings 15c; No. 1, 14c; fancy amber, 13c; buckwheat, 13c. Extracted, white clover, in barrels, 6¼@6½c; amber, in barrels, 5@5¼c; in cans, 1c to 1½c higher. Beeswax in good demand, 26c cash, 28c trade.

GRIGGS BROS.

PHILADELPHIA, Nov. 7. — The demand has been very good for honey in the past 10 days. In fact, it takes a little sharp, cool weather to get the people started, and after they start, the demand continues for some months. I would say that now is the height of the consumption of the honey season. We quote, in a jobbing way: Fancy comb, 15@17c; No. 1, 13@15c; amber, 12@13c. Extracted, fancy white, 7@8c; amber, 6½c. Beeswax firm at 28c.

We are producers of honey and do not handle on commission.

WM. A. SELSER.

CINCINNATI, O., Oct. 24.—The nice weather holds back the demand for comb honey. Crops seem to be exceedingly short and producers in the West keep the price high. We quote fancy water-white comb honey No. 1 white clover from 14@16c; No. 2 from 12½@14c. Extracted seems to be more plentiful. In barrels, light amber, 5¼@5½c; in cans, ½c more. White clover from 7@8c. Beeswax, 28@30c.

C. H. W. WEBER.

NEW YORK, Oct. 20.—Comb honey is now arriving very freely and the demand is good for nearly all grades. We quote fancy white at 13@14c; No. 1, 11@12c; amber, 10@11c, and buckwheat, 10c. Extracted in good demand. Arrivals of California are large while from other sources receipts are very light. We quote California at from 5½@7c per pound, according to quality and quantity; Southern in barrels and half-barrels, at 55@60c per gallon. Beeswax firm and scarce at 29@30c.

HILDRETH & SEGELKEN

INDIANAPOLIS, Nov. 7.—There is a tendency for higher prices on best grades of honey. The demand for strictly fancy white comb honey exceeds the supply. Demand for lower grades of comb honey not good. Numerous shipments of honey arriving, but no one producer seems to have very great quantities to offer. I quote fancy white at 15@16c; No. 1 in poor demand at 12c, and amber dull at 10c. Best grade extracted brings 8@9c in 60-lb. cans; amber slow at 5c. Beeswax, 28@30c.

WALTER S. POUDER.

ALBANY, N.Y., Nov. 8.—Our honey market is in healthy condition; demand good; receipts about equal to demand. Prices are not quite as high as last year, but the tendency has been to work off the honey before cold weather, and we think the crop has come forward more than usual this season, which is a good sign. We quote: Fancy white clover, 15c; A No. 1, 14c; No. 1, 13c; buckwheat, fancy, 13c; A No. 1, 12c; No, 1, 11@12c; straight buckwneat is wanted in this market. Extracted, quiet: white, 7½c; mixed, 6½c; buckwheat, 6½c. Beeswax scarce at 30c.

H. R. WRIGHT.

SAN FRANCISCO, Nov. 1.—White comb. 1-lb, sections, 8@9 cents; amber, 6@7c. Extracted, water-white, 5@—c; white, 4½@4¾c; light amber, 3¾@4 cents; amber, 3@3½c; dark amber, 2½@3c. Beeswax, good to choice, light, 25@27c.

The market is very dull despite the bullish articles in all the bee-papers. Apiarists are now beginning to let go at present prices, as they are beginning to realize that they must accept conditions as they are. This year is no exception to the rule, and it has always been the case that those selling early get the best prices for their honey.

FANCY WHITE EXTRACTED HONEY

CRATES 2-60 LB. CANS; 8c
TWO OR MORE CRATES; 7¼
LARGER LOTS; WRITE FOR SPECIAL PRICES. ALL F. O. B. CINCINNATI. CASH WITH ORDER. SAMPLES 10c. TO PAY POSTAGE.

THE FRED W. MUTH CO.

No. 51 WALNUT STREET, CINCINNATI, OHIO.
SEND FOR CATALOG OF BEE SUPPLIES WITH SPECIAL DISCOUNT.

NEW COMB HONEY-CROP OF 1905

We believe it would pay those having it in car lots or otherwise to write us. Give us your lowest spot cash prices, and fully describe the goods and style of package; when you can ship, etc. We handle more of these goods than any other firm in the U.S. Yours for business,

THOS. C STANLEY & SON, Bees and Honey
MANZANOLA, COLO., and FAIRFIELD, ILL.
28Atf Please mention the Bee Journal.

FOR SALE

Until further notice, finest quality new crop California Water-White White Sage and Light Amber **HONEY** in 60-lb. tins, 2 in a case; new cans and new cases Write for prices and samples, and state quantity you want.

HILDRETH & SEGELKEN
265 & 267 Greenwich Street, NEW YORK, N.Y
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Watch this Space During the Convention

Are You Going to the National Bee-Keepers' Convention at Chicago Dec. 19, 20, 21 ?

If so, be sure to make your headquarters

AT OUR CHICAGO AGENCY,
YORK HONEY & BEE-SUPPLY CO.,

141 and 143 Ontario Street,
H. M. ARND, Mgr.,

Where you will be cordially welcomed, and where all information can be obtained regarding Convention and city.

Respectfully,
G. B. LEWIS CO.

"It Pays" to be the "Early Bird"

8 PERCENT
FOR
CASH ORDERS THIS MONTH

Send in your order for Bee-Supplies now. Time is flying and early-order discounts are fast diminishing. By placing your order with us at this time you are not only realizing good interest on the money invested, but you will have your goods on hand all ready for use when needed. Now is the time to nail up your hives, put together sections, and get other goods in readiness for spring.

The following early-order discounts are allowed on all orders for Bee-Supplies accompanied by the cash.

7 percent during December
6 " " January
4 percent during February
2 " " March

G. B. LEWIS CO. Manufacturers of Bee-Keepers' Supplies **Watertown, Wis.**
U. S. A.

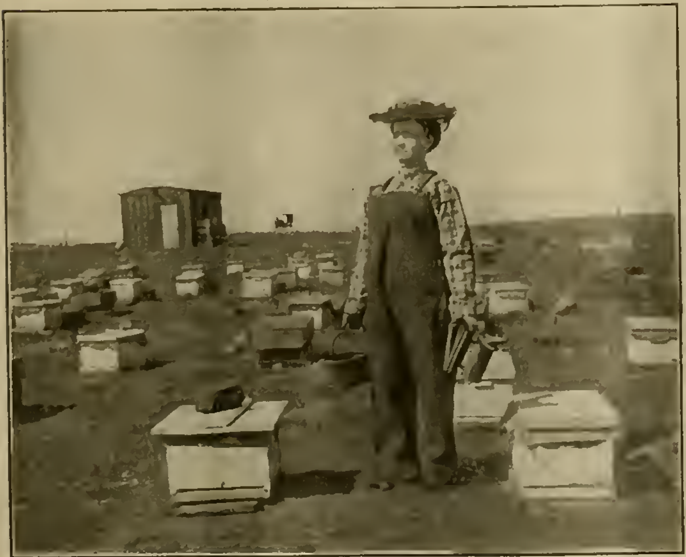
National Bee-Keepers' Convention at Chicago, Dec. 19-21

AMERICAN BEE JOURNAL

MASSACHUSETTS AGRICULTURAL COLLEGE

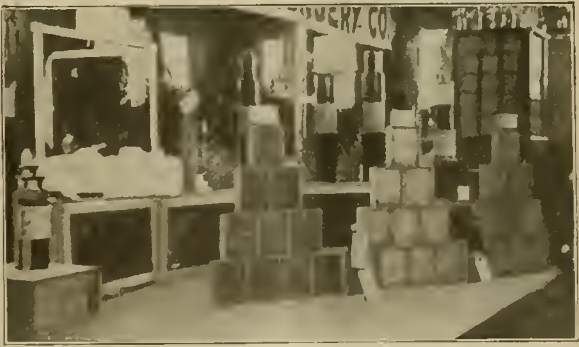
45th Year CHICAGO, ILL., NOVEMBER 23, 1905 No. 47

WM. A. SELSER. (See page 806)
Courtesy of Gleanings in Bee Culture.



A Suitable and Convenient Bee-Dress for Women.
(See page 810)

"The Editor's Apiary."
(Increased from 3 colonies to 14, during 1905.)



Wisconsin State Fair Exhibit of Wm. E. Prisk.

One of H. S. Ferry's Apiaries, of Mt. Vernon, N.Y.

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY
GEORGE W. YORK & COMPANY
334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec05" on your label shows that it is paid to the end of December.

SUBSCRIPTION RECEIPTS.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows that the money has been received and credited.

ADVERTISING RATES will be given upon application.

National Bee-Keepers' Association

Objects of the Association

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00

General Manager and Treasurer—
N. E. FRANCE, Platteville, Wis.

☞ If more convenient, Dues may be sent to the publishers of the American Bee Journal.

The Honey-Producers' League

(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

MEMBERSHIP DUES

1. Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.
2. Any honey-dealer, bee-supply dealer, bee-supply manufacturer, bee-paper publisher, or any other firm or individual, may become a member on the annual payment of a fee of $10, increased by one-fifth of one (1) percent of his or its capital used in the allied interests of bee-keeping.

GEORGE W. YORK, Manager,
334 Dearborn St., CHICAGO, ILL.

Italian Queen-Bee Free as a Premium

To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1905, we will give an untested Italian queen for sending us ONE NEW subscription with $1.00 for the Bee Journal a year. Now is the time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.

Special Sale on
HIVES AND SECTIONS

Until March 15. Dovetail Hives, 8-frame, 1½-story, 1.25; 10-frame, $1.40; No. 1 bee-way Sections, 3.90; No. 2, $3.40; 24 lb. Shipping-Cases, 13c; Foundation, Smokers, etc., cheap. Send for 24-page Catalog free.

W. D. SOPER,
Rural Route 3, JACKSON, MICH.
43Dtf Please mention the Bee Journal.

40-Page Catalog Free!

Full information regarding all kinds of BEE-KEEPERS' SUPPLIES. Best goods. Latest improvements. Danzenbaker Hives and Fixtures. Prompt shipments. JOHN NEBEL & SON SUPPLY Co., High Hill, Mo. 3Dtf
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Please mention Bee Journal when writing advertisers.

"If Goods are wanted Quick, send to Pouder"

BEE-SUPPLIES

Root's Goods at Root's Prices

Everything used by Bee-Keepers.
POUDER'S HONEY-JARS. Prompt Service.
Low Freight Rates. Catalog Free.

If you wish to purchase finest quality of HONEY for your local trade, write for my free monthly price-list of honey.

Why not secure your BEE-SUPPLIES NOW FOR NEXT SEASON'S USE, and avail yourself of the following very liberal discounts? Goods all Root Quality.

For cash orders before Dec. 1..8 percent | For cash orders before Feb. 1..6 percent
For cash orders before Jan. 1..7 percent | For cash orders before Mar. 1..4 percent
For cash orders before Apr. 1..2 percent

WALTER S. POUDER,
513-515 Massachusetts Ave., INDIANAPOLIS, IND.

Mention Bee Journal when writing.

DITTMER'S FOUNDATION IS THE BEST

Now is the time to prepare for next season.
If You Want to Save Money on Foundation, Working Wax for Cash, and on a full line of SUPPLIES, write for prices and discounts, and samples of our Superior Foundation.

E. Grainger & Co., Toronto, Ont., Agents for Canada.
The Bee and Honey Co., Beeville, Tex., Agents for Texas.

GUS. DITTMER, - Augusta, Wis.

Money Saved is Money Made

Bee-Supplies bought NOW are subject to a generous discount from our regular low prices. We do this to keep our factory busy. Send us a list of what you need and we will make you a price by return mail that will convince you.

If you want a catalog that is more than a price-list—that contains valuable information on bee-keeping—you must hurry to have your name placed on our mailing-list. Only a limited number will be printed. It's free, of course.

JOHN DOLL & SON,
Power Building, - - MINNEAPOLIS, MINN.

H. M. ARND,
Mgr.

When attending the National Bee-Keepers' Convention at Chicago, Dec. 19, 20, 21
COME AND INSPECT
LEWIS' BEE-WARE
AND MAKE YOUR HEADQUARTERS AT
YORK HONEY AND BEE SUPPLY CO. (Not Inc.)
141 Ontario Street, CHICAGO, ILL.
Long Distance Telephone—North 1559
Catalog and prices on Honey on application.
—If you want—
Good Goods at Factory Prices and Prompt Shipment, send your orders, or call on us.
BEESWAX WANTED—26c cash, or 28c when taking Bee-Supplies in exchange—delivered here.
8 PERCENT DISCOUNT IN NOVEMBER.

Please Mention the American Bee Journal when writing Advertisers

"DADANT'S FOUNDATION"

—AND—

BEE-SUPPLIES

Revised Prices on Foundation

IN LOTS OF

NAME OF GRADE	1-lb.	5-lbs.	10-lbs.	25-lbs.	50 lbs.
Medium Brood	.55	.53	.51	.49	.48
Light Brood	.57	.55	.53	.51	.50
Thin Surplus	.62	.60	.58	.56	.55
Extra Thin Surplus	.65	.63	.61	.59	.58

DISCOUNTS for Early Cash Orders

During	September	10 percent
"	October	9 "
"	November	8 "
"	December	7 "
"	January	6 "
"	February	4 "
"	March	2 "

Beeswax Wanted at all Times.

* * *

DADANT & SONS, Hamilton, Ill.

Bargain in Bee-Supplies

On account of removing from the city, I wish to sell at once the list of bee-supplies given below. Will sell the lot at less than one-half the present retail prices as shown by Root's catalog. They certainly are a big bargain.

7—8-frame hive-stands
2—8-frame wood-zinc boards
2—Danzenbaker Hive-covers
3—Reversible hive-bottoms
9—10-frame dovetailed supers
5—10-frame dovetailed winter.cases
24—8-frame dovetailed supers
9—8-frame dovetailed extracting-supers
2—10-frame dovetailed hives
3—8-frame dovetailed hives
75—M fences
1—Danzenbaker bottom and detachable alighting-board
10—8-frame hive-covers
16—Hoffman top-bars
800—4x5x1⅜ sections (new)
7—Miller feeders
2—8-frame bee-escape boards
25—8-frame hives (new)
25—8-frame 2P supers (new)
500 plain sections (new)

$40 will take the lot if ordered at once.

For further particulars, address, **MISS M. A. CALDWELL, Morton Park, Ill.**

Bee-Supplies!

We carry a large stock and greatest variety of everything needed in the Apiary, assuring best goods at lowest prices, and prompt shipments. We want every bee-keeper to have our **Free Illustrated Catalog**, and read description of Alternating Hives, Massie Hives, etc. **Write at once for Catalog**, either English or German language.

KRETCHMER MFG. CO., Council Bluffs, Iowa.

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Trester Supply Co., Lincoln, Neb.
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Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex.

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Get New Subscribers

Why not get a New Subscriber for the American Bee Journal, to send with your own renewal?

If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published, send $1.20 to

Prof. A. J. Cook, Claremont, Cal.,

—FOR HIS—

"Bee-Keeper's Guide."

Liberal Discounts to the Trade.

Bee-Keepers' Early Discounts

Now is the Time to send in your order for goods for use next season, and for all orders where cash accompanies we allow the following discounts:

Before	October 1	deduct	10 percent
"	November 1	"	9 "
"	December 1	"	8 "
"	January 1	"	7 "
"	February 1	"	6 "
"	March 1	"	4 "
"	April 1	"	2 "

Freight-Rates from Toledo are the lowest. Can take Honey and Beeswax in exchange for Supplies if you desire. Send for free illustrated Catalog. It describes and illustrates everything for both the Poultry and Bee Keepers.

GRIGGS BROS,
521 Monroe Street,
TOLEDO, - OHIO.

Mention Bee Journal when writing.

SPECIAL ISSUE of Gleanings in Bee Culture, Dec. 15, 1905

CHRISTMAS - 1905
GLEANINGS IN BEE CULTURE
THE A. I. ROOT CO.
MEDINA, OHIO, U. S. A.

We are pleased to announce that extensive plans are under way for a magnificent Christmas issue of Gleanings in Bee Culture, ready for mailing Dec. 15th. It is planned that this issue shall by far exceed in its wealth of contributed articles, its half-tone illustrations, and its cover design, anything heretofore attempted in bee-keeping literature. It will consist of at least 100 pages, and should be kept by every bee-keeper.

Cover

The cover is printed in three colors by one of the best color-printing establishments in the United States. We were not satisfied to attempt this ourselves, and have gone to great expense for the printing of this cover. The design is something unique, and very pleasing indeed. It shows the red clover in its natural colors in all its beauty, and, altogether, will make a bee-keeper's magazine that will compare favorably with any of the literary magazines of the present day.

Half-Tone Illustrations

During the past summer we have had a special artist who has been sent to various points especially to take photographs for us. He has traveled on our account alone the past summer over 4000 miles, and we can promise something very fine in our half-tones for this issue. In this preliminary announcement we are unable to specify definitely the subjects that will be given, but those who are at all familiar with Gleanings for the past year will know that a treat in illustrations is in store for them. We can definitely announce now that some of the prize photographs in our second photographic contest, American and Foreign, will appear in this issue. Our engravings are made by the very finest engravers in the United States, insuring first-class work in every case.

Writers

For this issue we shall have our regular contributors, such as Dr. C. C. Miller, G. M. Doolittle, Prof. A. J. Cook, J. A. Green, and Louis Scholl, besides special contributed articles, especially for the number, by E. W. Alexander, Dr. E. F. Phillips, of Washington, D. C., and others.

Other Features

Not only shall we make the magazine a thing of beauty and special value in its reading-columns, but special attention will be given to making it of value as a reference-book—a sort of year-book for bee-keepers—so that it will be kept for frequent reference throughout the following year. We expect to have all of the reliable advertisers represented in its columns, such as the breeders of various races of queens, dealers in bees, dealers in general supplies, dealers in special articles for bee-keepers. It will be valuable alike to the advertiser and to the subscriber, and no bee-keeper in the country can afford to miss this issue; neither can any advertiser afford to miss the opportunity of being represented in its columns.

Subscription Rates

We are making a short-time offer—a special trial trip of 6 months for 25 cents, which will include this Dec. 15th issue. This one number alone should be worth 25 cents to any bee-keeper. We can not promise to hold this offer open indefinitely, for our cover pages will necessarily have to go to press considerably in advance of the day of publication; and after the number contracted for are sold, we shall not be able to supply additional copies. It is important, therefore, that your subscription be received promptly.

WANTED—25 YOUNG MEN

There is now, and has been for years, a greater demand for experienced bee-help than there are men ready for these places. Each winter and spring we are obliged to disappoint many large apiarists by telling them we do not know where suitable help can be found. The demand is already begining for the season of 1906.

We have found that many who take our course in bee-culture by correspondence prefer to go into business for themselves, so we still need active young men who have a fair knowledge of the subject—men whom we know something about—who can be recommended for the places frequently offered. We have, therefore, determined to-day to offer a limited course in

BEE-KEEPING BY MAIL

We shall desiginate this as Course No. 2. The lessons are identical with the lessons in Course No. 1. The time, however, is limited to one year from enrollment. The course may be easily completed in 3 to 4 months. The following is the

OUTLINE OF COURSE

1. Definitions of Terms
2. Inmates of the Hive
3. Comb
4. Handling Bees
5. Transferring
6. Building Up Colonies
7. The Honey-Flow
8. Swarming
9. Rendering Normal
10. Preparing for Winter
11. Wintering
12. Spring Management
13. Bee Diseases—Symptoms
14. Enemies of Bees
15. Establishing an Apiary
16. Queen Rearing
17. General Examination

TERMS OF COURSE 2—FULL-CASH PAYMENT

Complete course as outlined, lessons, personal answers to all questions, including the A B C of Bee-Culture (500-page book,) and Gleanings in Bee Culture, (semi monthly,) for one year, $5.00.

With either the A B C or Gleanings omitted in case you have one, $4.00.

With both omitted in case you have both, $3.00.

If a full colony of Italian bees with tested queen is wanted, in either Dovetailed or Danzenbaker hive, we will, for $10.00 extra, deliver one colony at your express station, at any point in U.S. east of the Mississippi River, or make equal allowance to other points.

☞ CUT HERE ☜

The Root Correspondence School of Bee Culture, Medina, Ohio.

....190......

Enclosed find......................in payment of one course of instruction (No. 2) in the Root Correspondence School of Bee Culture.

Name.. P.O.. State.......................

County or Street .... Express Office..

Please answer the following: Have you a colony of bees?.................. Have you an ABC of Bee Culture of 1903 or 1905, which?.................... Have you already subscribed for Gleanings this year?....................

ESTABLISHED IN 1861

THE AMERICAN BEE JOURNAL

OLDEST BEE-PAPER IN AMERICA

(Entered at the Post-Office at Chicago as Second-Class Mail-Matter)

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor | CHICAGO, ILL., NOVEMBER 23, 1905 | Vol. XLV—No. 47

THE AMERICAN BEE JOURNAL is absolutely an independent publication, and not connected with any bee-supply business whatsoever. It stands entirely upon its merits as an educative force in the field of bee-keeping, and as a medium for legitimate advertisers in apicultural or other lines. It is the oldest, and only weekly, journal of its kind in America. Its publishers believe that it deserves to be in the hands of every would-be progressive successful bee-keeper in the land. It is in its 45th year, and to-day is acknowledged to be better in every way than at any time during its long and honorable history.

Editorial Notes and Comments

Disposing of the Honey Crop

This is an old subject, but it never will wear out nor become thread-bare. It is always interesting to the bee-keeper who has harvested a good crop of honey, but who has difficulty in turning it into cash or a profit.

Now, suppose those who have succeeded in realizing good returns on their honey just write us all about it, and we will publish it for the good of all. You need not name the exact place where you sold your honey, but just tell in detail *how* you did it. No one wants to "give away" the location of his best "fishing-hole" nor his "diamond-field," but he can tell *how* he discovered them—the road that led to them. That would not harm him nor lessen his trade, and would be a great help to others who are stumbling along in the dark toward success.

◆

December Climate of Chicago

We notice that some Southern bee-keepers seem to fear coming to the National convention in Chicago, Dec. 19, 20 and 21, lest the weather be so cold. We have not known it to be very cold here before Christmas. We are sure that no one need to stay away on account of the cold, for the hall where the convention is to be held is a warm one; also the Revere House is a very comfortable place in which to sleep.

Some Northern people didn't care to go to San Antonio on account of the extreme heat that might be found there, though such a thing would not keep us away any more than would extreme cold. Last February, at the Wisconsin convention in Madison, it was about 20 degrees *below* zero; at the National convention in Los Angeles, in 1903, it was 100 degrees *above* zero. That's only a difference of 120 degrees in extremes. And we stood both all right.

But let no one remain away from the Chicago convention on account of the cold. There will be plenty of coal here at that time, as there is now, so that should it be a little cooler than usual no one need be uncomfortable.

The advice for those coming to Chicago at any time is the same as that given to tourists going to Colorado or California, viz.: Take extra wraps along as the weather is liable to be changeable. Be prepared for whatever comes.

◆

Control of Swarming

Bee-keepers of the younger generation probably do not realize what a thorough revolution has taken place in one respect within the last half century or less. Formerly the number of swarms was considered the thing with which to gauge the failure or success of the season. "Last year was a poor year—hardly a swarm; this year has been fine—lots of swarms." All that has changed, until now the thing most eagerly sought by a large number, if not the great majority, is some method by which swarming may be prevented, or at least controlled.

What is best for one may not be best for another, but the practical bee-keeper is always on the lookout for something better, and any plan that has actually been put to the test by some practical bee-keeper is eagerly scanned. So here is another plan, given in the Bee-Keepers' Review by another very practical man, R. C. Aikin:

"I know of one or two methods that are practical. Unqueening will surely control; but, some seasons, and in some localities, such as have a second or later flow, it damages the crop from the late flow too seriously. The best plan I know of is to *give big room at all times outside the flow*, and if you have conditions that cause swarming *before* the flow comes, take away brood, or, in some other way, keep the conditions such that swarming *will not* occur, and then when the flow arrives shake out and mass the bees as swarms, hiving on starters. This way makes our swarms when we are ready, and, what is also of equal importance, *when the flow is ready*. When you have 'swarmed' the bees, have queens for such increase as you may make, that not any one is left queenless, and the oldest and poorest queens would best be left with the swarm on the old stand. Put the old hive on a new stand, and let it have a vigorous queen that will fill her hive with brood while there is not enough fielders to clog the combs with honey; this will insure a rousing colony for a later flow, if there is one. So handled, there is no question about results, if there is the nectar to be gathered; you master the swarming so that you can go when you please, and it will get the honey if it is to be had."

◆

Bees and Grapes Again

We have received the following from Mr. S. T. Crim, of Dawson, Ill.:

EDITOR YORK:—I enclose a clipping from the Illinois State Journal, published in Springfield, Ill. It makes me feel sad to think that the honey-bees have to bear the blame for something they did not do.

I have had a little experience in this. My grapes were all "chawed" up and mashed—the finest bunches—and the bees would swarm on the vine and suck the juice. I am satisfied that it is the little night-owls, or some other night-birds, that do the damage to grapes.

I find that the honey-bee has a great many enemies. I met an old lady on our streets a week or two ago who told me that my bees were eating up her peaches. I told her I was sorry for it. She said the bees ate a hole in a large peach and filled up the hole with honey. I thought she ought not to complain, for she then surely had peaches and honey, which is said to be good for cramping colic!

The next thing we hear will be that the bees are destroying the potato crop.

Now, how are we going to defend the honey-bees when some one wilfully lies about them?

October 23. S. T. CRIM.

The clipping to which Mr. Crim refers reads as follows:

BEES INJURE GRAPES.

INDIANAPOLIS, IND., Oct. 15.—Bees are to blame for a small yield of grapes in this State. It has been found that over one-third of the grape crop has been destroyed by the honey-makers. Bunches of grapes which were unprotected have been visited by bees and the juice drawn from the fruit. In consequence the fruit is unfit to be taken from the vines.

The damage wrought can hardly be estimated in dollars and cents. In the southern part of the State, where many of the hills are vine-clad and a few large vineyards are not unknown, the damage has been great.

The local market has felt the effects of the insects to such an extent that Indiana grapes have been not only a scarcity but almost an unknown factor.

Many who foresaw the work of the bees "sacked" their fruit before it began to ripen, and in this way saved much of the fruit from destruction.

It is probably a mistake to attribute the work of puncturing grapes to nocturnal birds. There are enough miscreants to do the work in broad daylight, although so shy as to be not easy of detection. Any one who carefully examines the holes made in the grapes will easily be convinced that the opening looks like the work of birds rather than bees. When freshly made, the hole is not round. Two holes are made at some little distance apart by the upper and lower mandibles, the bird striking the grape with its mouth open; then the closing of the mouth makes another line of opening from one of the first holes to the other. Bees wouldn't be likely to make such an opening.

This sort of defamation of the character of the bee does not come from a malicious desire to lie about it. It is merely a part of "yellow" journalism, that must have something sensational, all the better if true, but if nothing true is to be had, then something false must take its place; anything for the sake of something "yellow." Let us hope that the days of yellow journalism may speedily be found on the wane, and that the reading public may demand truth, and truth only, even about such a defenseless creature as the little busy bee.

LATER.—After the foregoing was written, we received the following from Mr. P. B. Thaxton, of Scott Co., Ill., taken from the Scott County Herald, which seems to fix the responsibility of grape-destruction upon the miserable sparrows:

THE SPARROW PEST AND GRAPES.

J. A. Tribrausser, writing to the State Journal at Springfield, says:

I read with interest an article in the State Journal headed, "Indiana Grapes Injured by Bees." I desire to state that I am a fruit-grower in a small way, and my experience has been that the sparrow is the source of the trouble.

These birds pick the grape first and then the bees suck the juice. That is what they did to my grapes this summer. First, they pulled off the peach blossoms; next they ate all my peas and lettuce; when raspberries began to ripen they destroyed them; followed this by picking the summer apples and early peaches full of holes and then ate the sugar-cane seed.

As there were thousands of these birds I tried to shoot them, and also discharged fire-crackers under their roost, but still they stay. It is only a question of a few years, if something is not done to destroy them, until they will destroy all the fruit.

I know it is the sparrow that destroys the grapes, because I put mine in paper-bags, and the birds picked holes in the bags and ate the grapes. This I saw them do.

They are here in bunches of thousands, and as no bounty is offered for their destruction, they are increasing so rapidly that they will destroy all the fruit unless they are done away with.

Miscellaneous News Items

The Fair Exhibit of Wm. E. Prisk, of Mineral Point, Wis., appears on the first page. When sending the picture he wrote as follows:

I send a photograph of my honey exhibit at the Wisconsin State Fair. The 4 pillars are all glass, filled with fancy white honey in 4x5 sections. The corners are grained in oak. The arch is painted white. There are 4 kinds of honey in the arch and 4 kinds of packages. In the center of the pillars stands a table with 6-ounce bottles filled with fancy extracted white clover honey, with glass between each tier of bottles. Back of the arch, which can not be seen in the picture, stands two more tables, one with 3 kinds of honey in round pyramids of fancy bottles, and the other table has 11 dozen fancy bottles of honey—12 kinds. Next to the tables are 3 square show-cases on top of each other. The bottom one has 4 deep and 4 shallow extracting frames perfectly filled and capped; the rest of the case is filled with sections from 2 pounds to ½ pound.

The next case has all the kinds of sections in use. The top case is filled with 3⅝x5 sections; next comes the shipping-cases, 80 in number, of 24 pounds each. You can see part of them. These cases are grained in oak and mahogany, and painted white and blue. The cases are filled with very fine white clover honey.

On top of the cases stands another glass show-case filled with different kinds of comb honey. Back of the cases are honey-cans from 60 pounds to 1 pound. The cans are painted yellow, red and blue. Back of the cans are the bees and sample cases of honey. You can see some of them in the small picture.

In the small picture are the 3 sample cases of comb honey—white, amber and dark. The premiums I received were as follows: First on sample case of white comb honey, extracted honey, amber comb, dark comb, dark extracted; and best and most attractive display of comb honey. Second premium on best and most attractive display of extracted honey.

They say the exhibit was one of the best ever put up. I tried to get a good picture of the exhibit, but all failed. I had about 4500 pounds of honey in the exhibit, about equal parts of extracted and comb honey. Everything was grained; that is, the woodwork, in oak and mahogany, which gave it a fine appearance.

I read the American Bee Journal every week with profit and pleasure, and will some day write an article on the way I secure such fine crops of fancy honey. W. E. PRISK.

We will be pleased to receive Mr. Prisk's article whenever he writes it.

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Mr. Wm. A. Selser, of Philadelphia, Pa., is one of the most widely known bee-keepers and honey-dealers in this country. He is also a director in the National Bee-Keepers' Association. A medical publication in the East, which was interested in bee-sting poison as a remedy, had this to say about Mr. Selser and his work:

Some 15 or more years ago the large manufacturing company in which Mr. Selser was a partner, was forced to the walls through the rascality of some of their selling agents. The failure left him greatly crippled in resources; without business or employment, and for some time without an open door to either. Gradually it came to him that there might be an opening in this line. When once this conclusion was reached, Mr. Selser threw himself into his new occupation with his indomitable energy, studying everything that could possibly be of any advantage, also taking a special course in the chemical laboratory of the college in the chemistry of honey and its adulterations, afterwards traveling extensively through the United States and Mexico for the purpose of observation. The result has been that he has built up a large and profitable business, and is considered one of the largest apiarists in the country, and an authority upon the adulteration of honey. We will let the story point its own moral.

BEE-STING REMEDY—A THRIVING INDUSTRY.

Since the discovery, a few months ago, that formic acid from bees' stingers is a sure cure for rheumatism and lumbago, the demand for the stingers has leaped far in advance of the supply. Chemists and wholesale druggists are placing orders for all of them that can be had, and apiarists are doing their utmost to supply the demand.

Experiments made by the H. K. Mulford laboratories, near Glenolden, proved the efficiency of the bees' stingers as a cure for rheumatism and lumbago.

On the end of the stinger, which is about one-sixteenth of an inch long, is a tiny sac, containing a drop of formic acid. This sac the bee detaches with the stinger after the latter has been deposited in human flesh.

Formic acid neutralizes uric acid, the presence of which in the system produces rheumatism and lumbago. Science has found a way to convert the stingers, with their supply of formic acid, into a serum, which, used as antitoxine or vaccine virus is used, effects a cure. The stingers bring $8 or $9 a thousand.

Mr. Selser, who has one of the largest apiaries about Philadelphia, finds himself quite busy at certain seasons of the year filling orders for these stingers. At this apiary there are more than 1,000,000 bees under cultivation.

Mr. Selser has devised a regular system for extracting their stingers for market Bees, he has discovered, do not like the odor of rubber, and when they detect it will often attack the rubber in a frenzied manner. He is experimenting with a soft rubber blanket or mat, which he places near the hives. The bees smell the rubber, and, attacking the mat, deposit their stingers, pumping into the small sac more formic acid than they are wont to do when attacking a person, or when not generally excited.

After the bees have vented their fury upon the mat it is removed and the stingers are extracted by means of small tweezers, care being taken not to destroy the formic acid pouch. As the stings are removed they are placed in small bottles containing pulverized sugar. These in turn are sent to chemical laboratories, where the formic acid is extracted and reduced to serum.

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"The Honey-Money Stories."—The Canadian Bee Journal mentions it thus approvingly:

We have been favored with a specimen copy of a handsome booklet of 64 pages, entitled, "The Honey-Money Stories," published by George W. York & Co., Chicago, and edited by Earl M. Pratt. It is very attractively gotten up, printed on enameled paper. and beautifully illustrated. It contains a variety of short stories, interspersed with facts and interesting items about honey and its use. The idea of the booklet is to arouse interest in honey, and increase its consumption. It will make an excellent gift-book. Single copies 25 cents; 5 copies $1.

Yes, it would make a nice "gift-book," especially for a person who is not now interested in the use of honey. Christmas will soon be here. Why not order 5 copies and present them to your friends. One copy with the American Bee Journal a year—both for $1.10; or 5 copies and the American Bee Journal—all for only $1.60. Send all orders to this office.

Contributed Special Articles

Prices of Honey Then and Now—Why the Difference?

BY G. M DOOLITTLE

IN the latter '70's a bee-keeper called on me, and soon our conversation turned on the price of honey, as the month of the year was August, and both he and myself had taken off quite a crop of white comb honey. I asked him what he thought the price would be that year, and without hesitation he said 25 cents a pound.

As I had counted on not more than 20 to 22 cents, I asked him on what he based his ideas of prices. His reply was as prompt again, "On the prices which butter is bringing in market."

I said, "What makes you compare prices of honey with butter?" His reply was that he had "been in the bee-business longer than I had," and that "he had noted for the past 20 years that the prices of honey and butter had not varied more than a cent or two in all that time."

He then told me of corresponding prices before the war, and cited me to what I knew of the high prices of the latter '60's and early '70's, when both butter and honey sold from 30 to 50 cents per pound, which I of course could not dispute. And, sure enough, I sold my honey that year at 25 cents. But with the '80's came a change, and the price of butter outran that of honey by 1, 2, 3, 4 and 5 cents, while the difference in price has been widening ever since.

A few days ago a neighbor of mine took his crop of honey to the city where he had sold it a few days before by sample at 10½ cents on an average, he having a crop of over 1200 pounds. And this honey was fully as good on the average as was my crop in 1875, when I was paid 28½ cents per pound for my whole crop. Nor is my neighbor a poorer salesman than myself.

Well, what about the price of butter to-day as compared with the price of 1875?—20 to 22 cents now with 28 to 30 in 1875.

Then in 1875, when I was drawing my honey to the city at 28½ cents per pound, I would stop on my way home and put on a load of coal for our winter's fuel, and the price was $3.50 a ton. Now with 10½-cent honey I have to pay $6.45. And I can do no better with these matters, try as hard as I can.

Again, in 1875 I was trustee in our school district, and with honey at 28½ cents per pound I hired a teacher for our school at $3.50 a week, she to teach on every other Saturday, or 5½ days to the week. To-day, with honey at 10½ cents a pound we have to pay the teacher for this same district $9.00 a week, and she teaches only 5 days for a week, and a short 6 hours for each day.

But I hear some one saying, "Why don't you sell your honey at home, peddling it out at better prices?" I have sold some in this way at 12½ cents, but an entirely country place will take only a small part of the honey produced by 3 or 4 apiarists residing within 5 miles of each other. Then I must pay $2.00 a day for any help I must hire to do work while I am peddling, and this would require an average daily sale of 100 pounds to meet the wages of hired help, while this help would not work to nearly as good advantage as I could, so that as far as finance is concerned, it is just as profitable for me to sell at 10½, and draw my whole crop off in a day, as it is to peddle it out at 12½ with a daily average sale of 100 pounds.

But why talk about *peddling?* In the '70's buyers came to my door seeking the whole crop. Now I am compelled to peddle, and strain every nerve possible to get less than one-half for my crop what I could in the '70's in bulk, while, on the other hand, I still continue to go after my butter, coal and school-teacher, with the butter but little lower, and the coal and teacher costing more than double what they did in the '70's. It costs me 2 pounds of honey to get 1 of butter to-day, while in the '70's it was pound for pound. In 1875, 100 pounds of honey would buy 8 tons of coal. To-day it will take nearly 500 pounds of honey to buy the same. And when it comes to hiring the district school-teacher a still larger proportion of my crop of honey must go. In fact, I do not know of a single item along the line of those I must have to give me a comfortable living that is as low in proportion as is the price of comb honey, at the present time. Sugar comes the nearest to it, and in rummaging the ground all over I know of nothing that will account for the difference unless it is this matter of sugar. At wholesale for the two, 2 pounds of granulated sugar can be gotten for 1 pound of honey, and this is about the same as could be done in the '70's.

And the public mind has seemed to change along this sugar-and-honey line, for, contrary to the '70's, I hear people arguing now that with the 10½ cents they must pay for 1 pound of honey they can get 2 pounds of sugar. Then to this sugar they can add 1 pound of water, and thus have 3 pounds of sweet of about the consistency of honey, which (especially where some of the nicer-flavored C sugars are used) they would just as lief have as the honey. And thus they conclude that they can not afford honey, unless, perchance, it is a little as a luxury to put on the table for company. So in this we are having an underconsumption of honey, which, in effect, is the same as an overproduction, which always means low prices.

I would like the opinion of others in this matter.

Borodino, N. Y.

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Luther Burbank and Better Honey Plants and Bees

BY PROF. A. J. COOK

In the Popular Science Monthly for August is a very interesting article on this great savant, by one of the most distinguished scientists of the world, Prof. De Fries, of Europe. It will be wise for all to read it, as it is full of valuable suggestion.

Burbank has originated more valuable varieties of plants than any other man of the world. The traits which have made Burbank so phenomenal in his line of experimentation are—

1st. Vision. He has a quick eye to see valuable characteristics in plant or flower.

2d. He has a great range of experience, which assures him that with enough labor and patience he can emphasize any desirable trait and build up around it other traits which can be introduced by discriminating crossings with other closely allied varieties, or possibly species, and thus may hope to originate almost any ideal, providing this ideal has a basis of fact in existing varieties or species.

3d. He has unlimited patience, and is quite willing to work and to wait. He is said in one case to have destroyed a half million plants, but secured one that he had wished for and planned to secure. Often he destroys hundreds of thousands. Burbank believes that heredity hangs upon all the environments of all the ancestors. The more varied the ancestors the more diverse the environments; the more probable the extremes of variations the greater possibility of desirable varieties. One who has vision to see what is valuable and desirable, to note germs of such in existing individuals, and possessed of infinite energy and patience, may hope and expect a success equal to anything that Burbank has attained. There are realms yet to conquer in these directions.

Better Honey-Plants.

To the bee-keeper this line of research possesses practical importance in two directions. We need better honey plants and better bees.

What a reputation Wisconsin and portions of New York have attained for their excellence as honey-localities! The basswood that has given this enviable fame is rapidly going. What is to take its place? No doubt red clover is rich with delicious nectar, but is for the most part too deep in the long flower-tubes to make this a good or desirable honey-plant. Some Burbank will yet see some plant like figwort or poinsettia rich with finest nectar, which he will build up into plants excellent for forage.

We must have plants equal to white clover, linden or sage, for honey, and to red clover and alfalfa for hay or pasture. Alfalfa is not perfect as a honey-plant, though it is very superior as a forage plant. No doubt a Burbank could secure a variety that would yield nectar in all places and under most trying conditions of drouth and climate.

A Superior Honey-Bee.

A few days ago it was my great pleasure to examine the bees on the grounds of the Department of Agriculture, with Dr. Phillips, who has them in charge. I was specially interested in a Caucasian queen. She was large and fine in form and shiny black in color. Her bees were much like the common black bees, yet were exceedingly amiable. We opened the hive with no use of smoke. It had rained hard nearly every day for a week—and we know such weather is not conducive to storing, and so usually makes cross bees We knocked against the hive and brushed the bees rudely, even pressing against them with the flat of the hand, yet they made no sign of anger, nor gave any evidence of irritation or wish to sting.

Dr. Phillips is planning to work for better bees. He has in these Caucasian bees all that we can wish for temper; and as they are of the black type, they will doubtless give a very white grade of honey. We will hope and believe that Dr. Phillips will be able to unite with these peculiarities such other desirable traits as the long tongue, activity and industry of the best yellow races. Burbank would affirm that we had in these bees every requisite to success. That it will be possible to keep all the good now found, and even to emphasize this, and by wise crossing and innumerable trials, we may brace these characteristics with others that will fashion the ideal—the perfect bee.

There is one feature of these experiments that is worthy of mention: One reason that Burbank has won his phenomenal laurels in plant-breeding comes from the fact that after crossing he can plant thousands of seeds, and thus try almost infinite experiments, and get results in a very short period. In most cases of breeding in animals the work is slow and results tardy of appearance. With bees the case is different; we can get results with great promptness, and each year may get valuable returns, or at least may push work to completion.

RESEARCH FUND.

Just here I have a suggestion that I believe we should press for all that may come of it. It will be remembered that Mr. Carnegie has endowed research with a large endowment. Some thousands of this fund have been wisely handed over to Mr. Burbank, that he may give his entire energy to the work where he has proved himself such a master. There are still thousands more to be granted. Why should not $1500 or $2000 be appropriated annually to aid Dr. Phillips in his valuable work of queen-breeding? This would make it possible to give fullest energy to these researches. The object sought is surely worthy most careful research and the best ability and attention.

We have every reason to believe that Dr. Phillips is specially well fitted by temperament, taste, culture and energy to do the work. There is every reason why this fund should be voted. If the two National Associations shall take the initiative they will surely exert a great, if not a telling, influence with the board that is in control of this fund. If such initiative is supported by earnest petition from bee-keepers all over the country, representing every State and, if possible, every county, then truly we may hope for the appropriation and look for most valuable results at Dr. Phillips hands. Let us lose no time in inaugurating this important movement.

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How Many Pounds of Honey Produce a Pound of Wax?

BY ADRIAN GETAZ

HOW many pounds of honey does it take to produce one pound of wax? is a question that has received all sorts of answers from, if I am not mistaken, 1½ to 30 pounds. The high figures, especially when it comes to 20 or 30 pounds, are certainly in error, as can be easily seen by considering how they were obtained.

The first experiments made were by Huber. He shut some bees in a suitable box and fed them sometimes brown sugar and sometimes honey, and saw the scales of wax produced and some comb built. The honey or sugar fed and the comb produced were weighed.

As an estimate of the honey used in a colony under normal conditions to produce one pound of wax, Huber's figures are useless. Too few bees were used, the temperature was merely that of the room, and therefore much below that of a hive. Each experiment lasted only a few days, and we know that the formation of the wax commences only three or four after the heavy-feeding (honey-flow or artificial feeding) has begun. Only the built comb was weighed, the scales of wax that might have been on the bodies of the bees were neglected.

The first idea that will come to the reader's mind is, How can it be possible that an experiment could be so carelessly conducted? And if the other observations of Huber were not better made, what reliance can we place on his assertions? But Huber never tried to find out how many pounds of honey it takes to make a pound of wax—he may never have thought of it at all. At the time he was living nearly everybody believed that the wax was gathered on the flowers, or at least on the plants. And all he wanted to prove was that the wax was not gathered outside, but is a secretion of the bees produced from the honey they eat; just like the milk of a cow is a product of the food she eats. Those who have used his figures to prove that it takes 20 or more pounds of honey to produce one pound of wax are the ones to blame.

Another set of figures, often misused in the same manner, are those of Dumas and Milne Edwards. Their experiments were very carefully conducted—everything, even the bees themselves. was counted, weighed and analyzed. Their sole object was to show, like Huber, that the wax is a secretion and a product of the honey consumed. But when it comes to determine how many pounds of honey it takes under normal conditions to produce a pound of wax, their figures are nearly as objectionable as those of Huber, and for similar reasons, and should never have been used for such a purpose.

Other experiments have been made in a more direct way by feeding confined bees. Most of them are more or less objectionable on the same lines as those of Huber. Even the best can not be considered as reliable. Bees confined, and without queens and brood, will not work like they do under natural conditions. So we may dismiss at once all attempts made in that direction.

FRENCH EXPERIMENTS.

Another method to get at it was undertaken and discussed a few years ago by Messrs. Sylviac, Maujean, Devauchelle, and other leading French apiarists, and reported during 1901 and 1902 in the Apiculteur and the Revue Internationale. The principle is this:

During the first two or three days—perhaps four—after a swarm is hived, quite an amount of comb is built, but only a few bees, comparatively, go to the fields; that is, when neither comb nor foundation is given. The lack of room to put in the nectar gathered forces a large number of bees to remain at home and work at wax-producing and comb-building instead of going to the field. It may be assumed that the few bees which go to the field bring in enough to keep the colony alive, and that the amount of wax-scales that the bees brought in on their bodies is offset by what they may have at the end of three days, or about; that is, before any honey is stored in the combs. It is then taken for granted that the comb built is the product of the honey brought out of the parent hive by the swarm, or at least an equivalent amount. Knowing that the bees of a swarm come out with their honey-sacs full, knowing the weight and approximately the number of bees of the swarm, and also the amount of honey that a bee does carry out when swarming, it ought to be very easy to make a fairly good estimate.

The figures obtained were widely different with the different swarms. Quite a discussion followed concerning their interpretation, the correctness of the assumptions mentioned above, and what corrections should be introduced. The outcome was an estimation of from 2 to 4 pounds of honey for a pound of wax produced under such circumstances.

During the discussion Mr. L. Maupy suggested that, chemically speaking, 100 grams of wax contain about 82 grams of carbon, 13 of hydrogen, and 5 of oxygen. On the other hand, 100 grams of honey contain 28 grams of carbon, 8 of hydrogen, and 64 of oxygen. It follows that to make up the 82 grams of carbon contained in 100 grams of wax, not less than 2½ or 3 times that amount of honey must be consumed.

So far as the mere transformation of honey into wax is concerned, I think this is all that is needed. But there is the extra warmth needed, to be considered. To make it plain, let us consider a colony having no super. All the warmth needed is enough to keep up the temperature in the brood-nest. But let us add a super. Then this super will have to be kept warm enough to insure rapid production of wax and comb building. And of course an extra quantity of honey will have to be consumed to that end. In very warm weather it might be next to nothing, but in cool weather it might be quite high.

HASTY'S EXPERIMENTS.

Some 20 years ago (in July, 1885) Mr. Hasty made an experiment in the same line as the above. A prime swarm was weighed and hived, and the hive placed on a delicate balance at sundown. The swarm weighed 2 pounds and 12 ounces. During the night the decrease of weight was 2 ounces, while during the experiment the average decrease every night was 4 ounces.

The plan was to weigh the colony morning and night, to ascertain the amount brought in; let them work 4 days, then cut out the comb built and weigh it, weighing the wax, honey and pollen contained separately. This last was done by weighing the comb first as it was, and then the wax after it was rendered. The operation was repeated twice at intervals of 4 days. The number of bees which died during these 12 days must have been insignificant, since the colony weighed as much at the close as at the beginning. The amount of honey taken from the old hive by the swarm, contrary to the general opinion, must have been small, since the colony weighed 7 ounces more after the first 4 days than at the beginning. They could have had but few wax-scales on their bodies when they came out, since more wax was produced during the second period of 4 days than during the first.

One point is somewhat uncertain. The difference in weight between morning and night is assumed to represent the honey gathered during the day. As a matter of fact it is not ripened, and is too heavy to represent ripe honey. But, on the other hand, bees have been eating during the day, and Hasty assumed that one would balance the other. The assumption can not be far from wrong, anyway. A deduction of 2 ounces per day, or rather per night, was made for what the bees consume merely to sustain their life. This was based on the first weighings of the swarm, as stated above.

First Trial.—Honey and pollen gathered during the first 4 days, 43 ounces. Deduct consumption 8 ounces honey, and pollen cut out 19 ounces, increase of honey in sacs attested by the increase of weight of the swarm, 7 ounces. Remainder, 9 ounces spent in producing 2 ounces and 10 drams of wax, or nearly 3½ ounces of honey for 1 of wax.

Second Trial.—Gathered 48 ounces. Add to this 6 ounces decrease in honey-sacs. Deduct food 8 ounces, honey and pollen cut out, 35 ounces. Remainder, 11 ounces having produced 4 ounces of wax. The proportion is 2¾ to 1.

Third Trial.—Gathered 48 ounces. Add 1 ounce decrease in honey-sacs. Deduct 8 ounces food, and 33 ounces cut out. Remainder, 8 ounces for 3½ of wax, or a proportion of 2½ to 1, or nearly so.—(Gleanings, Aug. 15, 1886.)

Prof. Bruner's Experiments.

Prof. Bruner, at the National Agricultural School at Cordova (Argentina), has made a specialty of wax-production for several years. The wax there is worth 54 cents a pound. Dark honey can be bought in unlimited quantities at 6 cents a pound. Summarily speaking, the process is to feed the bees all they can eat, and cut out the comb produced from time to time. The honey contained is returned to the bees. He says that it takes 68 pounds of honey to produce 10 of wax. That is a ratio of nearly 7 to 1. But this necessarily includes what the bees consume to rear brood and sustain their life as well as to produce wax. Hasty deduces even what they consume to live. In the French experiments related above, the daily food to sustain life was not deducted, but as in Hasty's case, no brood was reared.

Prof. Bruner's description with full details can be found in the Apiculteur for February, 1904, page 55. A short description of this process is also in the American Bee-Keeper of April, 1904, page 75.

Comb, Not Wax.

Of course for one making wax-producing a specialty, the full 7 pounds, or about, as well as all the other costs, will have to be charged against the price of one pound of wax. But it is not so with the apiarist who would occasionally convert some dark honey into wax. He has the bees already, and whether he produces wax or not they will eat enough to live and rear more or less brood. So in his case, the extra honey consumed to produce a pound of wax would probably not exceed 4 pounds. Four pounds of dark honey to produce one pound of wax worth 25 cents would not be a very profitable operation, after all.

But, hold on. Right here, while preparing this paper, almost an inspiration came to me. The "wax" thus produced by the bees is comb—partially-drawn comb. And as such is fully as valuable, and in many respects preferable to foundation, pound for pound. That means a cash value to the apiarist who can use them of some 60 cents per pound. I say a "cash value," for it may mean a good deal more in honey, at least to the comb-honey man. Many times the honey-flow opens suddenly, and 5, or even as much as 10 pounds of honey a day could be secured if there were combs to receive it. But it takes 3 or 4 days to start the wax secretion, and about that many more to build anything like a sufficient amount of comb. Why not, when there is no flow, convert the dark honey into partially drawn combs in the sections, and use them to secure a large portion of the white honey lost for lack of already built combs?

As much dark honey should be secured as possible. Extracting combs and supers might be used for that purpose. Then, when the flow is over, convert it into comb, if possible built in the sections, and the following year use these partially-built sections to secure as large a crop of white comb honey as possible. Here the dark honey comes first, so the management is a little different. Knoxville, Tenn.

Convention Proceedings

Report of the Texas Convention

BY LOUIS H. SCHOLL, SEC.

(Continued from page 793)

Next was discussed the

Preparation of the Apiary for the Honey-Flow.

Louis H. Scholl said the apiarist begins his preparations the previous fall by having strong colonies of bees, good, prolific queens, and plenty of stores to carry them through the winter and next spring until the honey-flow opens. An early examination for sufficiency of stores and strength of colonies is made in February and March, as soon as warm weather opens. Colonies are equalized by exchanging brood. His divisible brood-chamber hive has given him the best success, as the hive can be manipulated to give the strongest colonies, prevent swarming, and give the greatest yield of surplus honey, which means the most profit for the bee-man.

Willie Atchley begins in the fall previous, like Mr. Scholl, with good queens and plenty of honey. He uses full-depth frames above and below, and finds them the most profitable in *his* locality. To get bees into the bodies above, he entices them to storing by giving a frame of brood and honey there. He said he has tried nearly all kinds of hives except the Danzenbaker, and finds that he has best results with the regular Langstroth hive.

Pres. Laws said that location has much to do with the preparation for the flow. In some locations swarming is very troublesome early in the season; in others the troubles due to the swarming come later. Therefore, different manipulations are necessary. Labor is the most important consideration in the expenses with the bee-keeper, consequently all extra manipulations are expensive. He believes in getting the bees in shape by giving lots of room and plenty of stores, and this is to be done in the previous fall. Large hives are very essential.

Mr. Aten has little trouble preparing for the honey-flow. He keeps his bees mostly in 3 story 10-frame hives, leaving the winter supplies in the third story. In carrying the honey from the third story down-stairs the bees become accustomed to the combs above.

Willie Atchley has plenty of pollen and honey in the spring to stimulate his bees when the season opens.

Mr. Hagood begins feeding June 15. The honey-flow begins July 1. There is a long dearth between the spring honey and the main flow, so he must feed during June to prepare his bees until they gather the main honey.

T. P. Robinson related the following: Horsemint is periodical in this section, appearing in abundance and yielding a crop of honey once in 5 years, if they have rain so that it comes up in November of the previous year. A bee-keeper has to be a genius if he wants to succeed in bee-keeping in his locality, as most of the land is in cultivation. There are no wild flowers in the spring for the bees to build up on. They build upon the stores that are left them, and when the dearth sets in for 5 weeks before the honey-flow, feeding is resorted to. Cheap brown sugar is used, and the syrup is fed until the flow opens. Horsemint, cotton and mesquite come closely together, which gives a blend so that the product is a good-flavored honey, much in demand. He has trouble sometimes with what he calls "blubberry honey," and asks for opinions as to the cause.

Mr. Aten has had the same trouble in extreme wet weather with weak colonies which perhaps could not take proper care of the honey after it was stored. Honey absorbs moisture, and a weak colony does not keep up the required temperature.

Mr. Hagood says that when the forces of the colony are composed of more old bees than young bees, evaporation is not kept up sufficiently by the young bees to care for the honey brought in by the old field-bees.

Mr. Robinson stated that to show that honey does absorb moisture if not taken care of by the bees, it could be done by extracting thick honey one evening which would be hard to extract. Some of the same combs of honey left in the extracting-house over night, especially when the atmosphere is cool and damp. will be found to be thin and watery the next day, and can be extracted more easily.

Mr. Laws has had no trouble with such honey except in his baby nuclei, when green honey is given to them sometimes. That leaves the same condition as a weak colony which is not able to thicken or ripen the honey properly. He urges strongly that the bee-keepers let all green or unripe honey remain on the hives, as they lose customers if they put such souring honey on the market.

(Continued next week.)

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Report of the Chicago-Northwestern Bee-Keepers' Convention, held at Chicago, Ill., Nov. 30 and Dec. 1, 1904

(Continued from page 794)

WIRING BROOD-FRAMES WITH STARTERS.

"Should brood-frames with starters be wired to prevent breaking out of the comb?"

Mr. Hutchinson—Unless the hives are to be moved or shipped by express I don't think there is any necessity for it, simply for use in your own apiary. If they are to be shipped they need wiring. Possibly if you are going to produce extracted honey those wires would be of advantage, especially when the combs are new. After they are old they are not.

Pres. York—Would the bees be apt to build the combs properly over the wires when using only starters?

Mr. Hutchinson—Yes, they will.

Mr. Kimmey—My experience with bees has been limited to the first swarm I had issue. I hived upon simple frames with starters, and I never expressed nor move them anywhere except to carry them in the cellar, and three of those frames broke down; I don't know whether it was from my awkwardness, or weak combs, or what it was. It seems to me that after that experience I would always wire the frames.

Mr. Meredith—In wiring frames of foundation I have experienced the trouble of the bees gnawing in or around the wire, and to do away with this trouble I use the brush and slightly cover the wires with a little heated wax.

Mr. Becker—In my experience I have never used any wire. I always use half sheets of foundation for every brood-frame, and I have never had any trouble with frames breaking down.

Mr. Hoffman—I won't agree. If they do as I do they will have no trouble. Hive on full sheets of foundation, and put it in the hive, and then you want to wire. But I try, as a rule, to get all the combs drawn before that time. I put them in the top hives and have the bees draw them out, and then I can put them anywhere and they are all right. This wiring is a tedious undertaking for me.

Mr. Horstmann—The comb will not break if properly handled, so there will be no necessity for wiring for the purpose of holding the combs. Take a frame and turn it over, and they are going to work up into it, right up and down; they will never break.

Mr. Colburn—I think it depends upon whether the combs are fastened to all sides of the frames. I have had quite a number of combs where the frames were fastened securely, and I have done almost anything I wanted with them, and yet they never fell out; and then I have had a comb that was not fastened, and it simply tipped out by raising the frame horizontally.

Mr. Hoffman—Wiring foundation gives one so much more work, and that is why I am not so much in favor of it; by wiring you will get a straight comb, and true, and it will not sag, either.

Mr. Horstmann—The question asked is, Is it necessary to wire frames with starters? I say it is not necessary, but if you want to take the frames out of the brood-chamber to extract the honey it will be necessary to have it wired. But answering the question as it is, I consider it is not necessary, because I have handled the frames a great deal and I have never had one break yet, not even bend.

Mr. Hoffman—I don't understand by the question that it means starters. I wouldn't wire them at all.

(Continued next week.)

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Steadfast Honey

The nearest dream recedes, unrealized.
The heaven we chase
Like the June bee
Before the schoolboy
Invites the race:
Stoops to an easy clover—
Dips—evades—teases—deploys:
Then to the royal clouds
Lifts her light pinnace
Heedless of the boy,
Staring, bewildered, at the mocking sky.
Homesick for steadfast honey.
Ah! the bee flies not
That brews that rare variety.

—Emily Dickinson.

Cleaning Out Unfinished Sections

I wonder why our bees are so contrary about emptying out sections. We first tried putting on the supers of sections with an empty super between the supers of honey to be emptied and the brood-combs. They seemed to be perfectly satisfied with the arrangement, and let the honey remain where it was—at least the most of it. Next we tried putting a piece of burlap between, turning back a small corner of the burlap just so a bee or two could pass at a time. We confidently expected to find those sections beautifully emptied when we next visited them, but not a bit of it; those bees said, "No, the honey is all right where it is."

Next we tried putting the super of honey to be emptied in front of the hive with a small passage-way connecting it with the hive. Did they empty them? Not they.

Then some one, I have forgotten who, just now, said that if the super of sections to be emptied was put on a colony and when full of bees taken off and carried a short distance and covered so as to allow only a few bees to pass at a time, the bees would protect it against robbers and carry the honey to their own hive. Well, we tried it with just about the same degree of success. Those sections were emptied, but not by the bees of any particular colony. The booty seemed free to all.

Then came Mr. Bevins, on page 680, telling how he accidentally struck on such a fine way of getting his bees to empty his sections.

So, after supers were taken off, a super of unfinished sections was put on No. 32, and it was promptly occupied by the bees. It was then raised up, and a board put between the super and the hive, a small opening allowing a passage from the super into the open air, but there was no communication between the hive and the super. That super stayed there days, and the days extended into weeks, and the honey stayed, too. The unsealed honey was emptied, but not the sealed. At night the bees generally deserted the super (but not always), returning next day; but there was no appearance of robbing by other bees. No. 9 was also tried, but with no better results.

What is the matter with our bees, pray, that we can not induce them to do it when others do? Will Mr. Bevins or any one else tell us?

Bees Ready for Cellaring

Our bees have not been put into the cellar yet, and to-day (Nov. 10) they are having a good flight. We have had 1 or 2 pretty cold days, the thermometer standing as 22 degrees above zero in the morning, but it has never stayed cold long at a time. The colonies have been weighed and are unusually heavy. They seem to be in fine condition for their winter's nap.

Bee-Dress for Women

I send you a photo of my apiary and its attendant. This is not intended to compete for a prize, but to show that women can work with as much ease and convenience as men if they haven't too much false modesty.

Of course, the men do not know what a task it is to do outdoor work in skirts. If you wish to know, just try it and see the difference. You are just as liable to be the center of attraction until the strangeness wears away. The hands in the field will stop to look at you and smile, which will likely make you angry, as you are all tangled up in your skirts, and bees stinging you, and no pockets to put your tools in. Then you try to arise from the position you are in, and are compelled to untangle yourself. Gentlemen, try the skirts once, and see if you do not think my plan is all right.

But you know we Western women are quite independent. We can vote, break bronchos, round up cattle, and climb mountains; but you Easterners must not class us with the In-

dians, for we are quite at home in the parlor with our Southern sisters, although we do *not* use tobacco. MISS D. GOODALE.
Fort Collins, Colo.

[The bee-dress for Miss Goodale is sensible, convenient, and not unbecoming. It is really a travesty on modern intelligence and the progress of the age in most things that custom and society demand that woman must be handicapped in the awful way that she is in the matter of dress. Bee-work, especially, demands for woman the same degree of convenience that it does for man, and we must admire the courage that prompts Miss Goodale to cater to convenience rather than to social custom.—ED.]—Gleanings in Bee Culture.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B. Rural, Toledo, Ohio.

CLEANING UP UNFINISHED SECTIONS.

That tale of Edwin Bevins is not quite so hard to hold as the tail of a greased pig—though not quite so easy, perchance, as holding a "stick-tight" with a woolen glove. To be feared that neither he nor we can *very often* succeed in getting that kind of work well started. Not very surprising that it runs after a few thousand bees fully get the idea. It would often be very handy if we could make a colony hold a super against all comers and steadily take out whatever was put in it. Certainly worth experimenting at. Imaginable that there might be occasional success at making a strong and enterprising colony hold two hives, not necessarily near to each other, the one a home and the other a feeder. One idea for experimenting on would be to have a long, low tent, home hive at one end, and feeder hive at the other end; tent to be taken off when they once get fairly started. Page 680.

INSURANCE COMPANY FOR BEE-KEEPERS.

New and pert notions we mostly incline to call Yankee notions; nevertheless the "Britishers" sometimes get the start of us. An insurance company, with a lawyer always engaged at special rates, can doubtless scare off most bee-lawsuits, and win a large share of the remainder. Two cents per hive for such service is nearly as cheap as maintaining a defensive association in our style—and the returns are more comprehensive. Our Association, I believe, only *helps*, don't promise all the expenses of defense, and especially not all the damages when a suit goes adversely. New style, nice for "weun's." Hardly looks like a gold-mine for the company. Fear it will be quite a spell ere we find American capitalists that will start such a company. Page 725.

LICENSE FOR BEE-TERRITORY.

So the Australian colony of Victoria is so far up to date (or ahead of the date) that it licenses apiaries. The editorial on page 726 assumes that it is only on Government lands. That hardly looks consistent with offering the Government "two-sixths" of the fee. One would say that the whole fee would of course go to the Government for privileges on Government lands. But how the Australians came to consent to such rank paternalism as a license for bees that range over settlers' lands, I don't know. 'Spects it must be an anti-bee movement on the part of the settlers. Anyhow, to pay $12 80 for 4 square miles of territory is not what most of us would want to do. Some might. Another sign that the law is a hostile one is the way they enforce it. Take pay for a license, and then let the next man pay and locate as near as he chooses! Possibly our brethren there are so disgruntled that they exaggerate a little. But sooner than petition for License in Ohio I think I'd go the whole pig and sign for Prohibition. If officials should get too plenty around certain apiaries that might be named, there might be a little "Local Hoption."

DISTANCES BETWEEN OUT-APIARIES.

Yes, out-apiaries as near together as the pasture will allow, and out-apiaries as far apart as the exigencies of travel will allow, constitute two quite different ways of doing the thing. Both have decided advantages of their own. Pretty sure to catch a crop somewhere if you spread out far enough. A clever and long electric railroad ought to be nice to string the latter kind of out-apiaries on. Page 727.

A TREE COLONY OF BEES.

I have had a tree colony, too; but W. W. McNeal's was a much more satisfactory one—more normal. I think mine had the longer career; but his would no doubt have held out much longer than it did if he had let it alone. As it was a whole month, from Aug. 1 to Sept. 1, through several rain-storms, it is quite a record. Page 728.

BEES STINGING DARK COLORS.

It's a favorite fad of mine that the talk of bees stinging dark colors worse than light colors is mainly imagination and—well, humbug. Fairness seems to call for the notice of McNeal's chicken experience. Apiary fenced with netting and lots of little chickens of divers colors turned in. He finds (says so, anyway) that white chicks are seldom attacked by bees, brown ones more frequently, black ones often stung to death. Pretty strong evidence, must say. Page 728.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal, or to DR. C. C. MILLER, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

A Beginner's Questions

Last June a nice swarm of bees settled on the studding behind the granary, and we put it into a cracker-box. The box is 19 inches wide, 19 high, and 26 inches long. It is not more than half or two-thirds full. Do you think they will winter all right if put in a warm cellar?

2. When there is so much empty room in the box will they swarm next summer as early as a colony that is in a common hive, or will they not swarm at all?

3. Is there anything I can do to force them to swarm? I would like to have them swarm in June.

4. Do you think I should get a bee-book, or is the American Bee Journal enough? What book is the best for a beginner?

WISCONSIN.

ANSWERS.—1. The size of the box will not at all be against their favorable wintering in the cellar. Try to have the cellar no warmer than 50 degrees, and no colder than 40 degrees.

2. You can tell nothing positively about it, but they are likely to swarm later than if in a smaller hive, and it is possible they may not swarm at all.

3. Yes, you can diminish their amount of room. Next spring, after they get to flying, blow in a little smoke so they will not resent your working with them, and then saw off the lower part of the box. Without seeing it, it is hard to say just how much can be cut away, but you can see how far down the bees come, and cut away all the comb they do not occupy, and cut away the box to match. The bees don't need a fourth of the room in a box 19x19x26, so when you've cut off the lower part there will still be too much room—probably a vacant space at one or both ends. Pack hay or straw into the vacant part, so it will be quite solid.

4. You can't get along without a book. The best books for beginners are "A B C of Bee Culture," "Langstroth on the Honey-Bee," and Prof. Cook's "Bee-Keeper's Guide."

* * *

Wintering Bees—Other Matters

1. I have your book, but as my surroundings are different from yours, I will try to explain as well as I can, then I would like to have your judgment of the best course for me to pursue.

I live on what is called bottom land; 10 rods from my house on the east is a rise in the ground of about 40 feet high; this is then the level of the country. Then there is another drop of 17 feet to what would be called a third level. On the edge of this bank is my cellar or cave, and 6 rods further is another drop of 10 feet to a creek. My cave is 7 feet deep, 10x12, covered with poles and 6 inches of dirt, then a building over that, 14x25 feet. East of that is the well, 14 feet deep, with never more than 3 feet of water, nor less than 1½ feet, not more than 3 rods from the cave. The cave has one door which opens as yours shown in Fig. 7 of your book. It is just wide enough to slip a sugar-barrel through up and down; no other air-holes or windows. With the door shut it is as dark as it can be. It has a gravel and sandy bottom sealed with lumber, and seems to be as dry as any of the cellars.

I had 3 colonies last winter that stood out till in January. When the weather got so cold (25 degrees below zero) I got scared and took them in for about 2 months. One died in the spring; about one-third of their comb was a dry, brown color. They had honey. What was the matter with them? Would this cave be a fit place for bees?

I have 17 colonies now in 8 and and 10 frame hives—the 10-frame hives will average 54 pounds each, or, I think, 29 pounds of honey; the 8-frame will average about 22 pounds of honey each—the lightest 14 pounds, and from that to 27; the 10-frames 25 to 35 pounds of honey.

2. I have another plan for wintering. First, lay a floor 10 inches above the ground; on this put 4 inches of straw, sawdust, or forest leaves, whichever is thought best. Place half of the hives on that 3 or 4 inches apart, then pack between them and build up all around them, leaving a space of 4 inches in front, 12 or 14 inches at the back and ends, and pack it full of leaves, sawdust or straw. Of course, I would put a block over the entrance so as to keep it open, but closing it up until it is only ¼x4 inches. Then proceed to put the rest of the bees on top of the first ones, and build up as before; fill in all around them and over them, and put on a good roof, with their backs to the north. What say you of them for safe keeping until spring?

3. Would you advise me to break the seals now and fill the supers with leaves, and also put leaves over them for cellar-wintering? Do you think it would be an advantage in a damp place?

4. I bought a colony from a neighbor who made a box out of 1-inch lumber, 1½ inches larger than an 8-frame hive, and about as deep as a 1½-story hive. A super was put on that, resting without edges on the inside edges of the hive. The hive had no frames,

cross-pieces, nor anything. The super was filled with shallow extracting frames. The bees built to the bottom of the super-frames crosswise, and all other ways. They had plenty of room below without the super, and have it full; it is honey—80 pounds or more. If I should, next spring, after they get to going good, take the lid off the super, turn it upside down with a super on another hive, would it interfere with the queen laying in the upper hive, comb upside down? I mean to put excluders between the super and hive, and have another colony below. My idea is to have the top bees carry in honey in the top, the lower ones carry in honey through below till they put the top queen out of business. I would keep a trap at the top entrance to catch her when she comes out, so she won't take any bees off. I want that hive filled with honey before I cut into it. It is an experiment.

5. To whom can I send a sample of honey to find out if it is honey. I bought 60 pounds of extracted at 7½ cents a pound. It has a funny flavor—something like some kinds of cough syrup, and pretty poor stuff at that. A half-witted fellow came and wanted a lick of honey. I gave him a teaspoon and told him to help himself to the can. He dug out a teaspoonful and said, "That's fine." He lapped it in his mouth and said, "Ah—m, what's been in that can?" Would it cost me anything to have it tested by some one, more than the sending of the sample? If so, how much? I wish to know for curiosity's sake.

ILLINOIS.

ANSWERS.—1. Of course I can not say positively as to the character of your cave, but from your description it would seem to be a good place to winter bees, provided cellaring is your best plan. If I am not mistaken, however, you are in a latitude of 40 degrees, and as far south as that most bee-keepers prefer to winter their bees outdoors. It is probable that diarrhea was the trouble with the colony that died.

2. That will probably work all right. Leaves well packed are excellent, and it may be better not to have so much packing in front. Indeed, it is possible that none at all in front will be better. Then when a warm day comes the sun can get in its work on the front of the hive and start the bees to flying sooner than if packing were in the way.

3. For wintering in a cave, if there is abundant ventilation below there is no need to do anything but leave the corners sealed just as they were on the summer stands. But in a cave or cellar the entrance should be much larger than outdoors. Mine are 12x2 inches.

4. A queen will lay all right in comb turned upside down.

5. You can send it to Wm. A. Selser, 10 Vine St., Philadelphia, Pa. You might write him first and find out the expense, if any.

Reports and Experiences

Barbed Wire for Bee-Fencing

I notice in the American Bee Journal, Nov. 2, barbed wire is mentioned as a fence to enclose bee-yards, and it is claimed that it is beneficial, as it does not retard the bees in flight, and permits stock to keep the grass eaten down in front of the hives. Furthermore, it is asked if any one could give any light on the subject.

I will give you my experience of 5 years with this arrangement. I have a number of hives stationed in my yard next to the pasture fence, some 18 inches from the fence. The fence is a 3-wire one, and the bees fly under the bottom wire and are not retarded at all by the wire. The stock keeps all the grass eaten down in front of the hives perfectly, yet some varieties of weeds grow luxuriantly in front of the hives. This grass-mowing by the stock is all right, and always will be a success just so long as the pasture is overstocked, and the stock needs that over the fence for food, otherwise that on the outside will be sparingly used. It is a success with me since my pasture is overstocked.

The disadvantage with me is that the stock very often knocks off hive-covers, and occasionally turns over a hive. This trouble can be overcome largely by placing the hives a little further from the fence, if not entirely obliterated.

Taking it as a whole, this arrangement is an excellent one. To get the full benefit of this kind of fencing it would be necessary to fence the bees in a pasture, and have the hives in two long rows next to the fence, and leave a walk between the hives. It would be necessary to overstock the pasture where the bees were in order to get the stock to cultivate the bees.

T. P. ROBINSON.

Bartlett, Tex., Nov. 9.

Improvements in Wax-Rendering

I notice what Mr. Arthur C. Miller says on page 776 about the wax-press, and I think he has hit the nail squarely on the head. Any contrivance that shall cut, and, perhaps grind into small particles, the comb and slumgum, thus allowing the hot water to come into close contact with the wax, thereby liberating it, and enabling it by its less specific gravity to rise to the surface of the water, would, it seems to me, come nearer to perfection than any other wax-press that I've known any thing of.

Will not some inventive genius try his hand at getting up something of the kind, and be among those who make two blades of grass grow where formerly but one grew? I am too old, or I'd try it myself.

Lake Geneva, Wis. WM. M. WHITNEY.

No Honey-Flow This Year

Bees have scarcely stored enough honey this year to last them until next season. There was no flow this year.

ROY A. BOUTWELL.

Blencoe, Iowa, Nov. 4.

Honey Crop a Failure

The honey crop was a failure this year in this part of the State. I have 9 colonies of bees, and got no honey the past season.

JOEL DAUGHTREY.

South Greenfield, Mo., Nov. 6.

A Discouraging Report

The honey season here has been almost worse than a total failure, and very poor last year, having to feed the bees for winter. The prospect is fair to feed some bees this fall for winter. I think, besides, a good many bees in this part of the country starved to death the latter part of summer. I think that bees here generally will go into winter quarters in fair shape, so that I think the prospects are fair for a crop of honey next spring, which will surely be a boon to bee-keepers.

Beeville, Tex., Nov. 7. W. C. NUTT.

Report of An Astonishingly Good "Crop"

DEAR EDITOR:—From time to time I have read in your paper, but not always with that intense interest that perhaps I should have had, the reports from various bee-keepers about their crops for 1905. I note that some reports are good, some fair, and others very bad—the goodness, badness or fairness depending upon the amount of honey and the price per pound.

I want to submit the report of my crop for 1905, which so far as I have read excels all others.

I have 29 colonies, all in good condition, and nearly all in active work under direct observation. I have spent, this season, about half my time in giving the bees the best care, and have used 300 pounds of sugar. I have harvested 9 sections of honey, a lot of odds and ends showing the work of the bees, 29 "tons" of happiness, and 325 stings.

I have learned much that I never knew before about these wonderful little creatures—and I close the season with the apiary stocked full of plans, and myself full of ambition to get more happiness and more stings next year, to say nothing of information.

Yet there are old fogies who will tell you that it doesn't "pay" to keep bees!

EDWARD F. BIGELOW.

Stamford, Conn.

[There, Prof. Bigelow has thrown down the gauntlet; is any one ready to take it up?—EDITOR.]

CONVENTION NOTICES.

National Convention, Dec. 19, 20, 21.—Another slight postponement of the National convention seems to be unavoidable. The Fat Stock Show, upon which we have depended for reduced rates on the railroads, has been postponed two weeks. The reason given is "the inability of the builders of the amphitheater to secure structural steel for the same," and they don't wish to hold the show out-of-doors, hence the delay. Of course there will be no excursion rates during the first week in December, and, as it would be suicidal to attempt to hold a convention without excursion rates, the Executive Committee has decided to postpone the convention two weeks in order to take advantage of the Fat Stock Show rates. The dates for the convention will now be Dec. 19, 20 and 21, 1905.

The place of meeting has also been changed to Brunt Hall, in the Bush Temple of Music, corner of North Clark Street and Chicago Avenue (entrance on Clark Street.) This was done because it was feared that the accommodations at the Revere House might prove too limited. The Chicago bee-keepers, with their customary enterprise and liberality, will pay for the use of the Hall. It is only 5 minutes walk north from the Revere House, Southeast corner N. Clark and Michigan Sts., which will be headquarters for the members. This new place of meeting is in a new building where everything is modern. There are adjoining committee rooms, toilet rooms, good drinking water, and elevator service both day and night.

W. Z. HUTCHINSON, *Sec.*

The Chicago-Northwestern Bee-Keepers' Association will hold a social session at the Revere House, Dec. 19, 1905, at 10 a.m. At 2 p.m. the same day will be held the regular annual election of officers. Any other business coming before the meeting will be attended to. All who are accustomed to paying their dues to our Association, thereby getting two memberships for the price of one, will please hand the $1 to the secretary, or mail it to him as usual. The time in the evening will be given to the National, as will also the whole of the two following days. Every one is cordially invited to be present, both at the short sessions of the Chicago-Northwestern, and at the 7-session meeting of the National Association.

HERMAN F. MOORE, Sec.

Park Ridge, Ill.

N. B.—Any one paying their dues to the National Association *direct*, will have to pay another dollar to the Chicago-Northwestern, if it is desired to become a member of the latter organization also. Hand your dues to H. F. Moore, the Secretary. H. F. M.

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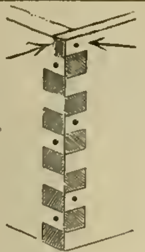

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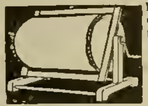

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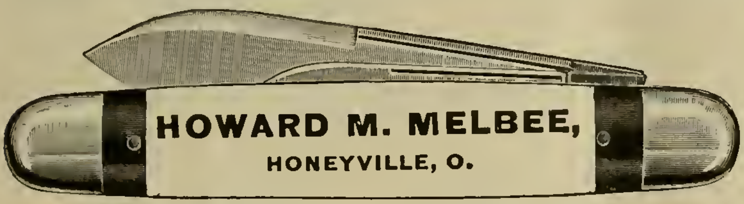

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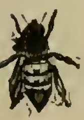

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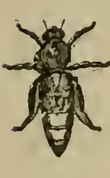

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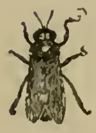

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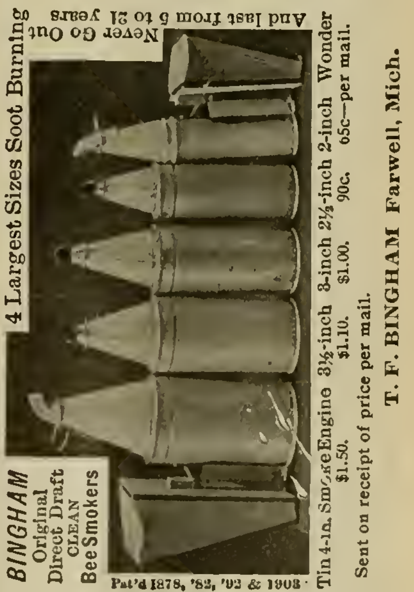

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Tin 4-in. Smoke Engine 3½-inch 3-inch 2½-inch 2-inch Wonder
$1.50. $1.10. $1.00. 90c. 65c—per mail.
Sent on receipt of price per mail.
T. F. BINGHAM Farwell, Mich.

OTISVILLE, PA., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. FRED FODNER.

Mention Bee Journal when writing.

DEATH TO LICE.

LICE SAP LIFE

That's how they live and thrive. You can't have healthy, profitable fowls or stock and have lice too.

Lambert's Death to Lice

promptly kills all insect vermin and makes sitting hens comfortable. Sample 10c; 100 oz., $1.00 by express.

O. K. STOCK FOOD CO.,
D. J. Lambert, Vice-Pres.
406 Monon Bldg., Chicago, Ill.

Best Goods in the World

Best Bee-Hives, Sections, Comb Foundation, and everything the bee-keeper needs. Now is the time to buy for next season's use. **Lewis' Goods at factory prices.** Catalog free. Cash orders at catalog prices on such goods as mentioned in special list.

Before November	9 percent discount	Before February	6 percent discount
" December	8 " "	" March	5 " "
" January	7 " "	" April	3 " "

Ask for special list now, free.

Honey-Packages for Marketing Honey

Such as Shipping-Cases, Tin Cans, Buckets, **Glass Jars with patent spring sealers and glass stoppers;** regular Glass Fruit-Jars, etc. Sample cases for sending samples of extracted honey by mail. Special prices on Glass Honey-Jars and Tin Buckets.

New Crop Extracted Honey

We have an abundance of the finest honey in the world. Can ship in cans and barrels. If you can't supply the demand in your locality write to us at once and tell us how much you can use; 10 cents for sample by mail, but we return the 10 cents with your first order.

Paint for Houses, Barns and Roofs

We can furnish any quantity of any grade of paint on short notice. Special prices on absolutely pure paint. Let us quote on paint for your house.

Write to-day and tell us what you want in our line, and how much. **Best service, lowest freight rates, satisfaction to all.**

C. M. SCOTT & CO. 1004 EAST WASH. STREET
INDIANAPOLIS, IND. ✣ ✣ ✣

Mention Bee Journal when writing.

12.80 For 200 Egg INCUBATOR

Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day

GEO. H. STAHL, Quincy Ill.

44A26t Please mention the Bee Journal.

For Thanksgiving Day

the Nickel Plate Road will sell tickets, within distance of 150 miles, Nov. 29 and 30, at rate of a fare and a third for the round-trip. Return limit Dec. 4. Three through trains daily to Ft. Wayne, Cleveland, Erie, Buffalo, New York, Boston and New England points. No excess fare charged on any train on the Nickel Plate Road. Standard equipment on all trains. Meals served in Nickel Plate dining-cars, on American Club Meal plan, ranging in price from 35 cents to $1.00; also service a la carte and Mid-day Luncheon 50 cents. Chicago depot, La Salle and Van Buren Streets, on the Elevated Loop. Telephones, Central 2057 and 6172. 36—46A2t

---

Glass Jars for Honey

We can ship **by return freight** at the following prices:

½-lb. Tip-Top Jars—case of 24 doz., $8.00; 3 cases, $23.00.

¾-lb. Tiptop Jars—1 case of 14 doz., for $5 25; 3 cases for $15.

1-lb. Tiptop Jars—1 case of 12 doz., for $5; 3 cases for $14.

Second Hand... Comb Foundation Mill

We have for sale a 6-inch Second-Hand Comb Foundation Mill. Used scarcely any; good as new. If interested write for price.

50 boxes good 2nd-hand 5-gal. Tin Cans, 2 in a box—10 boxes for $4 00.

When sending for sample jars include 15 cents each to cover postage, etc.

YORK HONEY AND BEE SUPPLY CO.
(Not incorporated)
141 Ontario Street, - CHICAGO, ILL.

WE SELL ROOT'S GOODS IN MICHIGAN

Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.

M. H. HUNT & SON,
BELL BRANCH. WAYNE CO., MICH

Mention Bee Journal when writing.

Wisconsin Basswood Sections

And Prompt Shipments

Is what we are making for our customers.

—DOVETAILED HIVES AND SHIPPING-CASES—

We carry a full line of SUPPLIES. Ask for Catalog.

THE MARSHFIELD MANUFACTURING CO., Marshfield, Wis.

---

8 Percent Discount

We will allow you the above Discount on all Orders accompanied by Cash during November. Send for our Catalog.

PAGE & LYON MFG. CO., New London, Wis.

FOR SALE HONEY-JARS

The No. 25 Honey-Jar, Porcelain Cover, Metal Screw Cap, absolutely tight, holding One Pound of Honey, Net, in shipping-cases of one gross each:

1 gross lots	$4.50 per gross
5 " "	4.00 "

Also in strong **RE-SHIPPING CASES** of two dozen each, heavy corrugated partitions, sides, top and bottom—a perfect protection—

1 case lots	$1.00 per case
5 "	.95 "
10 "	.90 "

Eight-ounce Tumblers, tin caps, 3 dozen in re-shipping case:

5 case lots, per case, 3 doz	85c
10 " " "	80c
20 " " "	75c

F.O.B. New York. Prompt shipment on receipt of order.

HILDRETH & SEGELKEN,
265 & 267 GREENWICH ST., NEW YORK, N. Y.

11Atf Please mention the Bee Journal.

For Sale—25,000 Lbs. of well-ripened Spanish-needle Extracted Honey put up in new 60-lb. tin cans—6c a pound for the lot, or 6½c for less, **F. J. GUNZEL, Weiner, Ark.**

44Atf Please mention the Bee Journal.

FOR SALE

Until further notice, finest quality new crop California Water-White White Sage and Light Amber **HONEY** in 60-lb. tins, 2 in a case; new cans and new cases Write for prices and samples, and state quantity you want.

HILDRETH & SEGELKEN
265 & 267 Greenwich Street, NEW YORK, N.Y

34Atf Please mention the Bee Journal.

NEW COMB HONEY-CROP OF 1905

We believe it would pay those having it in car lots or otherwise to write us. Give us your lowest spot cash prices, and fully describe the goods and style of package; when you can ship, etc. We handle more of these goods than any other firm in the U.S. Yours for business,

THOS. C STANLEY & SON. Bees and Honey
MANZANOLA, COLO., and FAIRFIELD, ILL.

28Atf Please mention the Bee Journal.

WANTED

Fancy White Comb Honey in Non-Drip Shipping-Cases; also White Clover Honey in cans and barrels. Please send samples and state your lowest price, delivered here. We pay **spot cash** upon receipt of goods.

GRIGGS BROTHERS
521 Monroe Street. - TOLEDO, OHIO.

41Atf Please mention the Bee Journal.

Big Discounts on Bee-Supplies

The following discounts apply on all orders except honey-packages for current use:

For cash orders before Oct. 1—10 percent

Nov. 1	9 percent	Feb. 1	6 percent
Dec. 1	8 "	March 1	4 "
Jan. 1	7 "	April 1	2 "

We handle **LEWIS' GOODS**, and carry a large stock, which insures prompt shipment. Catalog free. Address,

LOUIS HANSSEN'S SONS,
213 & 215 W. 2d Street, DAVENPORT, IOWA

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PURE ALFALFA HONEY

IN 60-POUND CANS

We have a good supply of **Pure Alfalfa HONEY** in 60-pound cans that we can ship by return freight at these prices: 2 cans, boxed, at 8½ cents a pound; 4 or more cans at one time, 8 cents a pound—all f.o.b. Chicago. Cash with order. Sample, by mail, 8 in stamps, to cover package and postage.

Address,

YORK HONEY AND BEE SUPPLY CO.
141-143 Ontario St., CHICAGO, ILL.

Mention Bee Journal when writing.

Lowest Prices

Big Discount for Early Orders

On Cash Orders

Before November 1..................9 percent
" December 1..................8 "
" January 1..................7 "
" February 1..................6 "
" March 1..................4 "
" April 1..................2 "

Bee-Supplies
OF ALL KINDS

Established Nearly 25 Years

We have published THE AMERICAN BEE-KEEPER for 15 years (monthly, 50c a year.) The largest and best illustrated magazine of its kind for the price published. Edited by two of the most experienced bee-keepers in America.

Sample copy free.

Our large, illustrated Price-List of Supplies free on application. Address,

The W. T. Falconer Mfg. Co.
JAMESTOWN, N. Y.

Mention Bee Journal when writing.

Headquarters for Bee-Supplies

ROOT'S GOODS

At Root's Factory Prices

Complete stock for 1905 now on hand.
Freight rates from Cincinnati are the lowest,
ESPECIALLY FOR THE SOUTH, AS ALL FREIGHT NOW GOES THROUGH CINCINNATI.

8 Percent Discount

For Cash Orders Received in

NOVEMBER

This applies to all goods with exception of Shipping-Cases and other Honey-Packages for current use.

C. H. W. WEBER CINCINNATI ...OHIO...

Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

Honey and Beeswax

Chicago, Oct. 5.—The demand for comb honey is about as usual for the season of year. Offerings from the surrounding States are fully equal to the past season, but that from Colorado and the Middle Western States are not. No. 1 to fancy white comb honey sells at 13@14c, with an occasional sale at 15c; the off grades embracing crooked combs, etc., sell at 11@12c; amber grades difficult to place at 9@10c. Extracted, white, 6@7c, according to kind, body and flavor and package; ambers 5½@6½ cents. Beeswax selling upon arrival at 30c if clean; off grades about 2c per pound less,

R. A. BURNETT & CO.

Kansas City, Oct. 9.—The honey market here at present is very strong at $3.25 per case for No 1 and fancy white comb in 24-section cases; amber and other grades selling for less according to quality. Extracted in good demand at 6½c. Beeswax, 28c.

C. C. CLEMONS & CO.

Cincinnati, Oct. 6.—Reports from differex parts of the country give evidence of an almost total failure in the comb honey crop, excepting the points in the North. We are selling this Northern comb honey at from 14@16 cents per pound, by the case. The demand for extracted honey is about equal to the receipts, which are good. We continue to sell amber in barrels at 5¼@6c; white clover at 6½@7½c. For beeswax we are paying 30c per pound, cash, delivered here.

(We wish to call the attention of the producer to the above honey quotations, who mistakably expects to receive these prices for his product. The above are our selling prices.)

THE FRED W. MUTH CO.

Toledo, Oct. 17—The honey market remains firm, with good demand, and prices the same as last quotations. Fancy white comb brings 15c; No. 1, 14c; fancy amber, 13c; buckwheat, 13c. Extracted, white clover, in barrels, 6¼@6½c; amber, in barrels, 5@5¼c; in cans, 1c to 1½c higher. Beeswax in good demand, 26c cash, 28c trade.

GRIGGS BROS.

Philadelphia, Nov. 7.—The demand has been very good for honey in the past 10 days. In fact, it takes a little sharp, cool weather to get the people started, and after they start, the demand continues for some months. I would say that now is the height of the consumption of the honey season. We quote, in a jobbing way: Fancy comb, 15@17c; No. 1, 13@15c; amber, 12@13c. Extracted, fancy white, 7@8c; amber, 6½c. Beeswax firm at 28c.

We are producers of honey and do not handle on commission.

WM. A. SELSER.

New York, Oct. 20.—Comb honey is now arriving very freely and the demand is good for nearly all grades. We quote fancy white at 13@14c; No. 1, 11@12c; amber, 10@11c, and buckwheat, 10c. Extracted in good demand. Arrivals of California are large while from other sources receipts are very light. We quote California at from 5½@7c per pound, according to quality and quantity; Southern in barrels and half-barrels, at 55@60c per gallon. Beeswax firm and scarce at 29@30c.

HILDRETH & SEGELKEN

Cincinnati, O., Oct. 24.—The nice weather holds back the demand for comb honey. Crops seem to be exceedingly short and producers in the West keep the price high. We quote fancy water-white comb honey No. 1 white clover from 14@16c; No. 2 from 12½@14c. Extracted seems to be more plentiful. In barrels, light amber, 5¼@5½c; in cans, ½c more. White clover from 7@8c. Beeswax, 28@30c.

C. H. W. WEBER.

Albany, N.Y., Nov. 8.—Our honey market is in healthy condition; demand good; receipts about equal to demand. Prices are not quite as high as last year, but the tendency has been to work off the honey before cold weather, and we think the crop has come forward more than usual this season, which is a good sign. We quote: Fancy white clover, 15c; A No. 1, 14c; No. 1, 13c; buckwheat, fancy, 13c; A No. 1, 12c; No, 1, 11@12c; straight buckwheat is wanted in this market. Extracted, quiet: white, 7½c; mixed, 6½c; buckwheat, 6½c. Beeswax scarce at 30c.

H. R. WRIGHT.

Indianapolis, Nov. 7.—There is a tendency for higher prices on best grades of honey. The demand for strictly fancy white comb honey exceeds the supply. Demand for lower grades of comb honey not good. Numerous shipments of honey arriving, but no one producer seems to have very great quantities to offer. I quote fancy white at 15@16c; No. 1 in poor demand at 12c, and amber dull at 10c. Best grade extracted brings 8@9c in 60-lb. cans; amber slow at 5c. Beeswax, 28@30c.

WALTER S. POUDER.

Denver, Nov. 11.—No. 1 white comb honey, per case of 24 sections, $3.35; No. 1 light amber, $3.00; No. 2, $2 50@3.00. Extracted honey, 6¾@7 cts. per pound. Supply is light and we could make quick sales of consignments at above figures. We pay 24c for clean, yellow beeswax delivered here.

THE COLO. HONEY-PRODUCERS' ASSN.

San Francisco, Nov. 8.—White comb, 1-lb, sections, 8@9 cents; amber, 6@7c. Extracted, water-white, 4¾@5c; white, 4½@4¾c; light amber, 3¾@4 cents; amber, 3@3½c; dark amber, 2½@3c. Beeswax, good to choice, light, 25@26c.

The honey situation remains unchanged since the last report. There is a good deal offering, but no business can be done at shipping-points at 4½c for water-white, this being the figure that is generally asked by apiarists. Dealers say that this price will have to be shaded at least ¼ cent in order to induce any speculation. White comb honey is being firmly held at 9c choice basis,

FANCY WHITE EXTRACTED HONEY

CRATES 2-60 LB. CANS; 8c
TWO OR MORE CRATES; 7½
LARGER LOTS; WRITE FOR SPECIAL PRICES. ALL F. O. B. CINCINNATI. CASH WITH ORDER. SAMPLES 10c. TO PAY POSTAGE.

THE FRED W. MUTH CO.
No. 51 WALNUT STREET, CINCINNATI, OHIO.
SEND FOR CATALOG OF BEE SUPPLIES WITH SPECIAL DISCOUNT.

FOR SALE

Extracted Honey—Fancy white, 7c; fancy amber, 6½c; ¼c less in 5-case lots or more.

C. C. CLEMONS & CO.
45Atf KANSAS CITY, MO.

HONEY AND BEESWAX

When consigning, buying or selling, consult

R. A. BURNETT & CO.,
199 SOUTH WATER ST. CHICAGO, ILL.

Watch this Space During the Convention

Are You Going to the National Bee-Keepers'
Convention at Chicago Dec. 19, 20, 21 ?

If so, be sure to make your headquarters

AT OUR CHICAGO AGENCY,
YORK HONEY & BEE-SUPPLY CO.,

141 and 143 Ontario Street,
H. M. ARND, Mgr.,

Where you will be cordially welcomed, and where all information can be obtained regarding Convention and city.

Respectfully,
G. B. LEWIS CO.

"It Pays" to be the "Early Bird"

8 PERCENT
FOR
CASH ORDERS THIS MONTH

Send in your order for Bee-Supplies now. Time is flying and early-order discounts are fast diminishing. By placing your order with us at this time you are not only realizing good interest on the money invested, but you will have your goods on hand all ready for use when needed. Now is the time to nail up your hives, put together sections, and get other goods in readiness for spring.

The following early-order discounts are allowed on all orders for Bee-Supplies accompanied by the cash.

7 percent during December
6 " " January
4 percent during February
2 " " March

G. B. LEWIS CO. Manufacturers of Bee-Keepers' Supplies Watertown, Wis. U. S. A.

National Bee-Keepers' Convention at Chicago, Dec. 19-21

AMERICAN BEE JOURNAL

OUR TOIL DOTH SWEETEN OTHERS

45th Year CHICAGO, ILL., NOVEMBER 30, 1905 No. 48

WEEKLY

CHUSETTS
AGRICULTURAL
LEGE

THANKSGIVING

BY THOMAS C. HARBAUGH

In the twilight of November
With its foliage of gold
Comes again the glad Thanksgiving
With its customs dear and old;
And beneath the starry banner,
As it floats from sea to sea,
We a happy Nation gather—
Fears at rest, for all are free.

Not a hand in all this Nation,
In the East and in the West,
Bars the mansion or the hovel
To the kind Thanksgiving guest;
From the balmy groves of Southland
To the nodding pines of Maine
Nature, filled with joy and gladness,
Spreads the yearly feast again.

We are thankful for the blessings
That have crowned our cherished land—
Fruitful orchards, golden harvests,
Peace and love from strand to strand;
'Neath November's robes of beauty
Hidden lies the warrior's sword,
And the olive branch is hanging
O'er Columbia's festal board.

Aye, from mountain unto mountain
'Neath the Union's azure dome,
To the feast we spread this Autumn
Bid the absent "Welcome home!"
'Round the board where all are merry
Let the rarest sunlight play;
With the love-key of Thanksgiving
Open every heart to-day.

Thus let hoary age and childhood
Join their hands with happy glee,
In the homes beside the wildwood
And the mansions by the sea;
For our Union naught can sever—
'Tis defended by the brave;
Then let us greet forever
This fair land our fathers gave.

Spread the table with His bounties—
Let there be a feast of song;
Let the voices of the household
Fair Thanksgiving Day prolong;
All are welcome to the pleasures
That it brings to every farm,
And to-day let hearts be beating
With impulses glad and warm.

Hail the hallowed Thanksgiving
That the Pilgrim Fathers gave!
'Tis their legacy forever
On the land and on the wave;
Then, as Freedom's chosen people,
We our destiny fulfill—
Let the future's sweet Thanksgivings
Find us grander, greater still.

—*Successful Farming.*

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY
334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec05" on your label shows that it is paid to the end of December.

SUBSCRIPTION RECEIPTS.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows that the money has been received and credited.

ADVERTISING RATES will be given upon application.

National Bee-Keepers' Association

Objects of the Association

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00

General Manager and Treasurer—
N. E. FRANCE, Platteville, Wis.

☞ If more convenient, Dues may be sent to the publishers of the American Bee Journal.

The Honey-Producers' League

(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

MEMBERSHIP DUES

1. Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.
2. Any honey-dealer, bee-supply dealer, bee-supply manufacturer, bee-paper publisher, or any other firm or individual, may become a member on the annual payment of a fee of $10, increased by one-fifth of one (1) percent of his or its capital used in the allied interests of bee-keeping.

GEORGE W. YORK, Manager,
334 Dearborn St., CHICAGO, ILL.

Now is the Time to Order

Your Bee-Hives, Sections, Shipping-Cases, Berry Boxes, and Crates for the coming season. By sending us a list of goods wanted, we can save you money.

SHEBOYGAN FRUIT BOX CO.
35A18t SHEBOYGAN, WIS.

Mention Bee Journal when writing.

The Rietsche Press

Made of artificial stone. Practically indestructible, and giving entirely satisfactory results. Comb foundation made easily and quickly at less than half the cost of buying from the dealers. Price of Press, $1.50—cash with order. Address,

ADRIAN GETAZ,
45Atf KNOXVILLE, TENN.

☞ J. G. Goodner, of this State, writes me that he "prefers to pay $25 for a Rietsche Press than do without it."—A. G.

Please Mention Bee Journal when writing advertisers.

"If Goods are wanted Quick, send to Pouder"

BEE-SUPPLIES

Root's Goods at Root's Prices

Everything used by Bee-Keepers.
POUDER'S HONEY-JARS. Prompt Service.
Low Freight Rates. ∴ ∴ ∴ **Catalog Free.**

If you wish to purchase finest quality of **HONEY** for your local trade, write for my free monthly price-list of honey.

Why not secure your **BEE-SUPPLIES NOW FOR NEXT SEASON'S USE**, and avail yourself of the following very liberal discounts? Goods all **Root Quality.**

For cash orders before Dec. 1..8 percent | For cash orders before Feb. 1..6 percent
For cash orders before Jan. 1..7 percent | For cash orders before Mar. 1..4 percent
For cash orders before Apr. 1..2 percent

WALTER S. POUDER,
513-515 Massachusetts Ave., INDIANAPOLIS, IND.

Mention Bee Journal when writing.

DITTMER'S FOUNDATION IS THE BEST

Now is the time to prepare for next season.

If You Want to Save Money on Foundation, Working Wax for Cash, and on a full line of SUPPLIES, write for prices and discounts, and samples of our Superior Foundation.

E. Grainger & Co., Toronto, Ont., Agents for Canada.
The Bee and Honey Co., Beeville, Tex., Agents for Texas.

GUS. DITTMER, - Augusta, Wis.

Money Saved is Money Made

Bee-Supplies bought NOW are subject to a generous discount from our regular low prices. We do this to keep our factory busy. Send us a list of what you need and we will make you a price by return mail that will convince you.

If you want a catalog that is more than a price-list—that contains valuable information on bee-keeping—you must hurry to have your name placed on our mailing-list. Only a limited number will be printed. It's free, of course.

JOHN DOLL & SON,
Power Building, - - MINNEAPOLIS, MINN.

H. M. ARND,
Mgr.

When attending the National Bee-Keepers' Convention at Chicago, Dec. 19, 20, 21

COME AND INSPECT

LEWIS' BEE-WARE

AND MAKE YOUR HEADQUARTERS AT

YORK HONEY AND BEE SUPPLY CO. (Not Inc.)
141 Ontario Street, CHICAGO, ILL.
Long Distance Telephone—North 1559

Catalog and prices on Honey on application.

—If you want—

Good Goods at Factory Prices and Prompt Shipment, send your orders, or call on us.

BEESWAX WANTED—26c cash, or 28c when taking Bee-Supplies in exchange—delivered here.

7 PERCENT DISCOUNT IN DECEMBER.

Please Mention the American Bee Journal when writing Advertisers

"DADANT'S FOUNDATION"

AND

BEE-SUPPLIES

Revised Prices on Foundation

NAME OF GRADE	1-lb.	5-lbs.	10-lbs.	25-lbs.	50 lbs.
	IN LOTS OF				
Medium Brood	.55	.53	.51	.49	.48
Light Brood	.57	.55	.53	.51	.50
Thin Surplus	.62	.60	.58	.56	.55
Extra Thin Surplus	.65	.63	.61	.59	.58

DISCOUNTS for Early Cash Orders

During	September	10 percent
"	October	9 "
"	November	8 "
"	December	7 "
"	January	6 "
"	February	4 "
"	March	2 "

Beeswax Wanted at all Times.

DADANT & SONS, Hamilton, Ill.

87½ Percent Saved

In mortality to those insured in the

TOTAL ABSTINENCE DEPARTMENT

OF

Security Mutual Life Insurance Company

EACH POLICY HOLDER is entitled to a Bond issued by the National Total Abstinence League.

YOU may hold a policy and BOND.

General and special agents wanted. Address,

3D28t **A. S. RENNIE, Mgr., 614 Marquette Bldg., Chicago, Ill.**

Bee - Supplies!

We carry a large stock and greatest variety of everything needed in the Apiary, assuring best goods at lowest prices, and prompt shipments. We want every bee-keeper to have our **Free Illustrated Catalog**, and read description of Alternating Hives, Massie Hives, etc. **Write at once for Catalog**, either English or German language.

KRETCHMER MFG. CO., Council Bluffs, Iowa.

—AGENCIES—

Trester Supply Co., Lincoln, Neb.
Shugart & Ouren, Council Bluffs, Iowa.
Fulton & Ford, Garden City, Kansas.
I. H. Myers, Lamar, Colo.
Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex.

Mention Bee Journal when writing.

Get New Subscribers

Why not get a New Subscriber for the American Bee Journal, to send with your own renewal?

If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published, send $1.20 to

Prof. A. J. Cook, Claremont, Cal.,

FOR HIS

"Bee-Keeper's Guide."

Liberal Discounts to the Trade.

Bee-Keepers' Early Discounts

Now is the Time to send in your order for goods for use next season, and for all orders where cash accompanies we allow the following discounts:

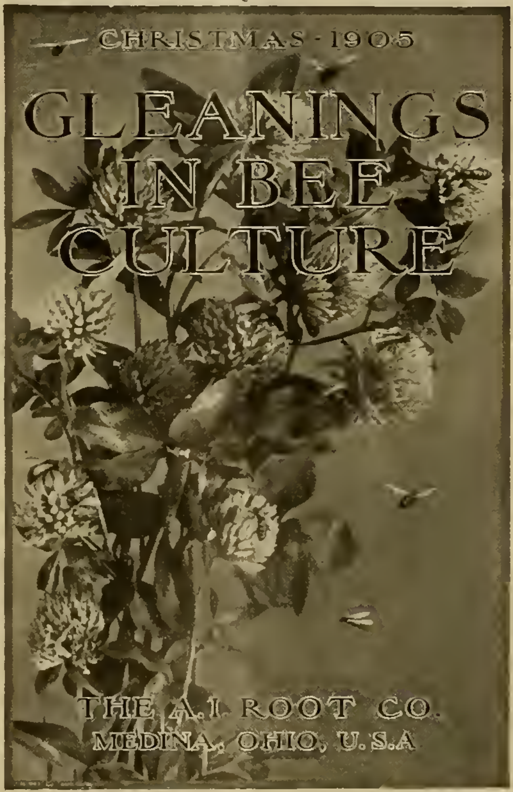
Before	October 1	deduct	10 percent
"	November 1	"	9 "
"	December 1	"	8 "
"	January 1	"	7 "
"	February 1	"	6 "
"	March 1	"	4 "
"	April 1	"	2 "

Freight-Rates from Toledo are the lowest. Can take Honey and Beeswax in exchange for Supplies if you desire. Send for free illustrated Catalog. It describes and illustrates everything for both the Poultry and Bee Keepers.

GRIGGS BROS.
521 Monroe Street,
TOLEDO, - OHIO.

Mention Bee Journal when writing.

SPECIAL ISSUE of Gleanings in Bee Culture, Dec. 15, 1905


CHRISTMAS - 1905
GLEANINGS IN BEE CULTURE
THE A.I. ROOT CO.
MEDINA, OHIO, U.S.A.

We are pleased to announce that extensive plans are under way for a magnificent Christmas issue of Gleanings in Bee Culture, ready for mailing Dec. 15th. It is planned that this issue shall by far exceed in its wealth of contributed articles, its half-tone illustrations, and its cover design, anything heretofore attempted in bee-keeping literature. It will consist of at least 100 pages, and should be kept by every bee-keeper.

Cover

The cover is printed in three colors by one of the best color-printing establishments in the United States. We were not satisfied to attempt this ourselves, and have gone to great expense for the printing of this cover. The design is something unique, and very pleasing indeed. It shows the red clover in its natural colors in all its beauty, and, altogether, will make a bee-keeper's magazine that will compare favorably with any of the literary magazines of the present day.

Half-Tone Illustrations

During the past summer we have had a special artist who has been sent to various points especially to take photographs for us. He has traveled on our account alone the past summer over 4000 miles, and we can promise something very fine in our half-tones for this issue. In this preliminary announcement we are unable to specify definitely the subjects that will be given, but those who are at all familiar with Gleanings for the past year will know that a treat in illustrations is in store for them. We can definitely announce now that some of the prize photographs in our second photographic contest, American and Foreign, will appear in this issue. Our engravings are made by the very finest engravers in the United States, insuring first-class work in every case.

Writers

For this issue we shall have our regular contributors, such as Dr. C. C. Miller, G. M. Doolittle, Prof. A. J. Cook, J. A. Green, and Louis Scholl, besides special contributed articles, especially for the number, by E. W. Alexander, Dr. E. F. Phillips, of Washington, D. C., and others.

Other Features

Not only shall we make the magazine a thing of beauty and special value in its reading-columns, but special attention will be given to making it of value as a reference-book—a sort of year-book for bee-keepers—so that it will be kept for frequent reference throughout the following year. We expect to have all of the reliable advertisers represented in its columns, such as the breeders of various races of queens, dealers in bees, dealers in general supplies, dealers in special articles for bee-keepers. It will be valuable alike to the advertiser and to the subscriber, and no bee-keeper in the country can afford to miss this issue; neither can any advertiser afford to miss the opportunity of being represented in its columns.

Subscription Rates

We are making a short-time offer—a special trial trip of 6 months for 25 cents, which will include this Dec. 15th issue. This one number alone should be worth 25 cents to any bee-keeper. We can not promise to hold this offer open indefinitely, for our cover pages will necessarily have to go to press considerably in advance of the day of publication; and after the number contracted for are sold, we shall not be able to supply additional copies. It is important, therefore, that your subscription be received promptly.

WANTED—25 YOUNG MEN

There is now, and has been for years, a greater demand for experienced bee-help than there are men ready for these places. Each winter and spring we are obliged to disappoint many large apiarists by telling them we do not know where suitable help can be found. The demand is already begining for the season of 1906.

We have found that many who take our course in bee-culture by correspondence prefer to go into business for themselves, so we still need active young men who have a fair knowledge of the subject—men whom we know something about—who can be recommended for the places frequently offered. We have, therefore, determined to-day to offer a limited course in

BEE-KEEPING BY MAIL

We shall desiginate this as Course No. 2. The lessons are identical with the lessons in Course No. 1. The time, however, is limited to one year from enrollment. The course may be easily completed in 3 to 4 months. The following is the

OUTLINE OF COURSE

1. Definitions of Terms
2. Inmates of the Hive
3. Comb
4. Handling Bees
5. Transferring
6. Building Up Colonies
7. The Honey-Flow
8. Swarming
9. Rendering Normal
10. Preparing for Winter
11. Wintering
12. Spring Management
13. Bee-Diseases—Symptoms
14. Enemies of Bees
15. Establishing an Apiary
16. Queen Rearing
17. General Examination

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Complete course as outlined, lessons, personal answers to all questions, including the A B C of Bee-Culture (500-page book,) and Gleanings in Bee Culture, (semi monthly,) for one year, $5.00.

With either the A B C or Gleanings omitted in case you have one, $4.00.

With both omitted in case you have both, $3.00.

If a full colony of Italian bees with tested queen is wanted, in either Dovetailed or Danzenbaker hive, we will, for $10.00 extra, deliver one colony at your express station, at any point in U.S. east of the Mississippi River, or make equal allowance to other points

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The Root Correspondence School of Bee Culture, Medina, Ohio.

....190......

Enclosed find......................in payment of one course of instruction (No. 2) in the Root Correspondence School of Bee Culture.

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Please answer the following: Have you a colony of bees?................ Have you an ABC of Bee Culture of 1903 or 1905, which?.................. Have you already subscribed for Gleanings this year?..................

Established in 1861

THE AMERICAN BEE JOURNAL

Oldest Bee-Paper in America

(Entered at the Post-Office at Chicago as Second-Class Mail-Matter)

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor

CHICAGO, ILL., NOVEMBER 30, 1905

Vol. XLV—No. 48

Editorial Notes and Comments

The Minnesota Convention

This convention will be held Dec. 6 and 7, 1905, in the First Unitarian Church in St. Paul. It was announced that there would be no meeting of the Minnesota State Association this year on account of the National convention announced for the same time in Chicago, but now that the National is to be held Dec. 19, 20 and 21, it has been decided to hold the Minnesota convention Dec. 6 and 7.

◆

False Conclusion from True Premises

The following clipping from the St. Louis Republic, of Oct. 26, has been sent to this office:

> MAKING OF HONEY.
>
> The bees make the quality of their honey according to the kind of food or flowers from which it is procured. Eminent authorities on bee-culture state that when bees are fed scorched honey the honey in the combs did not suffer therefrom. The same results occurred when granulated honey was fed to the bees. Honey can therefore be adulterated in the combs. Glucose, when fed to bees, is deposited in the combs as glucose, and it has long been known that certain flowers produce honey of a superior quality to that derived from others.

There must be something out of whack in the reasoning machinery of the one who wrote that item. Three things are stated as facts:

1. The quality of honey varies according to its source. Sure.

2. Scorched honey fed to bees will be scorched honey in the combs. Very likely.

3. Granulated honey fed to bees will be deposited as granulated honey in the combs. No proof of that; but for the sake of the argument admit its truth and proceed to the therefore. *Therefore* honey can be adulterated in the combs. O lame and impotent conclusion!

In each of the three cases mentioned, there is apparently no thought that anything but honey is put into the combs, whether it be from one flow or another, scorched or granulated; where, then, is there any adulteration?

Then as a sort of corollary the statement is made that glucose fed is glucose in the comb; and to give greater weight there is coupled with it the well-known fact that one flower may give a better quality of honey than another.

There is something a little off from the usual slander, that comb honey may be found on the market with never the touch of a bee upon it—entirely artificial—but it is hardly likely the editor of the Republic would have admitted the item if he had stopped to consider the impression likely to be made upon the mind of any uninformed reader who reads the item with its significant heading. It will be something like this: "Honey found on the market in the shape of pretty white combs is likely to be *made* honey, and nothing but glucose."

If the Republic should try feeding glucose to bees, it might find what others have found, that it would have a hard job to get the bees to accept the stuff, no matter what it might be in the comb if they should accept it.

The Republic has shown a disposition in the past to be fair to the bees; will it not do the fair thing now by saying that when honey is found in the comb it is the genuine product of the bees?

◆

Ants and Bees

The British Bee Journal says: "Ants are so often troublesome to bee-keepers by entering hives and carrying off the bees' stores, that in all good text-books the ant is classed among the 'enemies of bees.'" There are ants and ants. In the North, in this country, the ant can hardly be classed as an enemy of the bee, although annoying to the bee-keeper by crawling over his hands and arms. They seem to make their nests about hives rather for the sake of the heat furnished by the bees, and, as stated in Root's "A B C of Bee Culture," "A *good* colony of bees is never in danger of being troubled in the least by ants."

There is, however, a large ant in the North, and probably as well in the South, which, although it may not trouble the bees, is especially dangerous to those who have out-apiaries and frequently haul bees. It burrows into the wood of hive-floors, honey-combing them in such a way that a very little will knock a hole through, causing bad accidents in hauling.

In the South, however, there are ants which destroy queens, and in South America they destroy whole colonies of bees.

◆

Experiments of the Past Season

Doubtless many of our readers conducted apiarian experiments of various kinds during the past season, and are now ready to report on them for the benefit of others. We would be pleased to give them a place in these columns, or at least as many of them as we may have room for.

Also, we would like to have honey-crop reports and interesting experience with anything relating to bees, honey and beeswax.

As ye have been benefited by the writings of others, so ought ye to write for their benefit. How about it?

◆

Making Nominations for the National

A letter has been received from W. Z. Hutchinson, editor of the Bee-Keepers' Review, replying to the editorial on page 773. As it will be no betrayal of confidence, and especially as it is desirable that both sides be fully presented, the letter is here given:

> DEAR BROTHER YORK:—Allow me to thank you for the very fair and gentlemanly review of my criticisms regarding the publication of the names of the nominees for office in the National. If all would criticise in the spirit displayed in those remarks of yours, discussion would always be a pleasure.
>
> Still further, let me explain that I had no intention of *blaming* Bro. France, in the sense in which that word is usually employed, for publishing the whole list of those who had received votes. It is true that the instructions of the Directors do not say that he must *not* publish them—it simply says that the two persons receiving the greatest number of votes shall be the candidates, and that their names shall be published in the bee-journals, and the *inference* would be that those would be the only names published.
>
> Still further, the rules do not say that the General Manager shall *not* tell who received the greatest number of votes, but the inference is that he would not. The rules tell what *shall* be done. Bro. France has done

what he was instructed to do, and then has done still more, and my contention is that this *additional* "doing" nullifies the object of the nominations.

I was one of the Directors at the time when these rules regarding nominations were passed, and I can truthfully say that there was no idea or intention of so arranging things as to "keep them in the dark." Personally, I would have no objection to the publication of all of the names that received any votes, also the giving of the number of votes that each man received, and I think that all of the Directors are like-minded—probably the same might be said of all of the members. But here is the point—the one that the Directors had in mind when those rules were framed, viz.: that there might come a time when some undesirable man would be elected to some important office. This man might think, himself, that he was doing his work well, but it would be apparent to every one else that he was not. We could not go to him and tell him that he was not a fit man for the office; that would be too cruel. The proper thing to do would be to elect some other man in his place; but, without nominations how could it be done? The opposition votes would be scattered among a dozen or more candidates. It was for this reason, and this *only*, that the number of candidates was limited to two. The man in office is almost sure to be one of these candidates, and, if there is only one opposing candidate who will receive all votes not cast for the man already in office, there will then be some hope of some time electing a new man to office.

I agree most fully with Bro. York, that when the members of an association are gathered together in convention, and an informal ballot is taken, that it is customary to announce all of the names of those who have received votes, also to state the number of votes that each man has received; but it is also true, just as my Chicago brother says, that the vote for officers in the National Bee-Keepers' Association is somewhat different from the election of officers at a convention. At a convention there is an opportunity to discuss candidates between sessions; besides, when officers are elected at a convention held first in one portion of the country and then another, it is almost universally the custom to elect new officers at each convention. If we are going to elect a new man—if that is practically a foregone conclusion—then I see no objection to announcing the names of all who have received votes, and also giving the number of votes that each receives. In fact, if the officers were to be elected by a plurality vote, as is the case in our National Association, then there is no earthly use of an informal ballot. The way that things have been running in the National in the past it has been almost impossible to elect a new officer when the voting was done by mail.

I agree with my brother, that the old officer *may* be the best, but we wish to be *able* to elect a new one if we wish to do so, and it was to secure that end that the rules for nominations were made as they were. If they don't accomplish their object—if they have objections that can be remedied—if there is some better way—I, for one, shall be only too glad to see them changed.

As ever yours,
Nov. 10, 1905. W. Z. Hutchinson.

The foregoing raises the question: Is it certain that a new man's chances would always be lessened by the addition of a second new candidate, and equally certain that the old incumbent's chances for remaining in office would thereby be lessened? Suppose Smith to be the old man, and Jones the new. Smith gets 55 percent of the votes, Jones 45 percent, and so Smith continues in office. Now suppose that instead of having only the two candidates there were three, Smith, Jones, and another man, Brown. Is it unreasonable to suppose that whatever votes Brown gets will cut in on the Smith vote much more than on the Jones vote? So, with the three candidates in the field it would be nothing impossible that out of every 100 votes Smith should get 35, Jones 40, and Brown 25. If, therefore, the "only" object of the informal ballot be to get rid of one already in office—and it may be said by way of parenthesis that the object at least *ought* to be more than this—it seems at least possible that in some cases it might be accomplished more easily with two new names than with only one.

The closing sentence of Mr. Hutchinson's letter is in the right spirit, and worth considering. There need be no difficulty, probably, in making a change of plan if any one will suggest what is that better plan. And in this connection it may be well to mention one fault so glaring that some means should be found for its remedy. Mr. Hutchinson, speaking of a man in office whom it is not desirable to continue in that office, says:

> "We would not go to him and tell him that he was not a fit man for the office; that would be too cruel."

In just about that cruel position is every member put who in the formal ballot votes for a new man for Secretary. For the ballots are sent to the Secretary to be counted, and it is putting a man in a rather cruel place to say to him: "You must vote for the old Secretary, or else you must walk up to his face and say, 'I want a new man to take your place.'"

It is an easier thing to find fault than to suggest the remedy, but remedies are not generally sought till faults are known, and it is in order for any one to act on either line.

◆

Carloads or Cartloads of Honey

A little time ago mention was made of the purchase of 70 carloads of honey by the National Biscuit Co. Our genial Afterthinker was taken to task for making it larger than it was. Now a correspondent of the British Bee Journal turns the other end of the spy-glass upon it, and reports "seventy cartloads!" At least, that is what appears under the name of D. M. Macdonald, but possibly he may have a score to settle with the "printer's devil."

One of the Best.—Mr. F. M. Scott, of Dodge Co., Minn., when sending his renewal subscription for two years, wrote:

> "The American Bee Journal is one of the best and most able journals in America."

We would like to have say 25,000 readers just like Mr. Scott, in addition to our present list of honey-folks. We would like to have all who can do so, help us to find them. We offer premiums—good pay—for the work of getting and sending in new subscriptions for the American Bee Journal. Why not ask your neighbor bee-keepers to subscribe?

To Foreign Subscribers.—We wish to repeat a notice that we have given several times before. It is this: None of our special offers made in the American Bee Journal, or anywhere else, apply to foreign subscribers. So whenever we receive a foreign order with remittance we always apply it all on subscription to the American Bee Journal. If our foreign readers would think about it a little, they would quickly see that our special offers would not apply to them, on account of the extra postage to foreign countries. Also, we do not export any queens except to Canada and Cuba.

Some Expert Opinion

How Best to Use Convention Time

Ques. 31—*1. What proportion of the time of a bee-convention do you think should be taken up with a question-box for the greatest benefit to the average bee-keeper attending?*

2. What proportion for your own greatest personal enjoyment?

J. M. Hambaugh (Calif.)—1. One-fourth.

Jas. A. Stone (Ill.)—1. The larger part of it. 2. All.

Morgan Bros. (S. Dak.)—1 and 2. At least one-third.

Rev. M. Mahin (Ind.)—1 and 2. The more the better.

E. E. Hasty (Ohio)—Well, at a venture, say about half for both 1 and 2.

Adrian Getaz (Tenn.)—1. About half. 2. All, and the funniest the better.

Wm. McEvoy (Ont.)—Nearly all the time. All the time would suit me much better than anything else.

O. O. Poppleton (Fla.)—1. As much as possible aside from transacting all really necessary business. 2. All.

R. C. Aikin (Colo.)—1. Three-fourths. 2. Are we so selfish? Can't enjoy helping and seeing others enjoy themselves?

G. M. Doolittle (N. Y.)—Just in proportion to the wants of the greatest number of "average bee-keepers attending."

S. T. Pettit (Ont.)—1. May be about 20 percent. 2. Whatever suits the crowd. I enjoy seeing any meeting happy in a proper way.

R. L. Taylor (Mich.)—1. Sufficient for the answering and discussion of all the questions that can be obtained. 2. Nearly all the available time.

Eugene Secor (Iowa)—1. All of it. 2. In National conventions I think it is well to have some leading authorities give papers on important subjects.

C. P. Dadant (Ill.)—Two-thirds of it. I enjoy that part best, and learn more than anything else, for we get the ideas of individuals from all directions, on the spot.

Prof. A. J. Cook (Calif.)—1. From a large experience in conducting Farmers' Institutes, I should say from one-fourth to one-third. 2. I should enjoy what gave the most benefit to all.

Mrs. J. M. Null (Mo.)—According to the character of the questions. Convention time is *always* valuable, and in some cases to furnish a text-book and a journal or two would be economy.

C. Davenport (Minn.)—A large part of it. I have never been able to get away to attend any large conventions, but I think the question-box and short discussions on live topics would interest me most.

N. E. France (Wis.)—1. Often it is the best part of a convention. If papers are read they should be short, and the discussion follow. 2. Nearly all questions, and when all are free to ask practical questions.

L. Stachelhausen (Tex.)—1. This depends upon circumstances. If some Dr. Millers are in the crowd an all-question-box convention will be a success; in other conventions I have seen a few hours' question-box an entire failure.

J. A. Green (Colo.)—I have always gotten the most enjoyment and good from the free discussion and interchange of experience and opinion that is most likely to result from the question-box method. At the best conventions I ever attended, no papers were read. Papers are sometimes valuable in starting discussion, but usually more good can be gotten out of a paper, at far less expense, by reading it carefully at home.

E. S. Lovesy (Utah)—1. About one-third of the time of each session. 2. The same. If there is a lack of interest at the beginning of the meeting the question-box can be used to create a general interest in the whole program.

E. D. Townsend (Mich.)—Personally, I enjoy the question-box the best of anything about a convention, and I can not conceive of anything better for the main part of the time. Did you ever see a convention lag during the question-box session?

E. Whitcomb (Nebr.)—The question-box certainly is very interesting. One-half of the sessions of our conventions could very profitably be taken up by the question-box. By it we gain an insight into what our listeners desire us to talk about.

G. W. Demaree (Ky.)—1. Speaking from some experience in convention work, I regard the educational feature of the exercises—such as asking and answering questions—the most important of all. 2. Let us enjoy our *duty well done*, rather than *self*-enjoyment.

C. H. Dibbern (Ill.)—At least half of the time of a bee-convention should be devoted to the question-box, and the more questions on new lines the better. For my own part, I would rather have all the time devoted to short, spicy questions than listen to long, windy essays.

P. H. Elwood (N. Y.)—Only a limited time when a committee answers the questions. When you have the whole convention answer, and you have a president equal to the task of directing and changing the discussion at the proper time, it is a good way to run a convention for a session.

Dr. C. C. Miller (Ill.)—1. All the time that can be spared from necessary business, unless it be occasionally a short paper or talk on a special topic by one particularly qualified. 2. All of it, provided there's a man in charge who wisely directs the discussion; preventing it from being switched off into something of little value, and changing to the next question as soon as all the milk has been gotten out of the cocoanut.

Dr. J. P. H. Brown (Ga.)—1 and 2. Answers to these questions depend very much. In most conventions of this kind there is too much time wasted by mouthy and "windy" members who like to hear themselves talk, to the exclusion of more experienced and better-informed members who are not blessed with a fluency of words. A *time limit* should always be set to prick the gas-bags and give the modest members a chance.

Contributed Special Articles

December Work In and About the Apiary

BY C. P. DADANT

If our bees have not been put into winter quarters on the summer stands, but are intended to be put into the cellar, this is the month to do it, and rather early than late. In latitudes further north they are usually put away during November. A change of weather after a warm day is the proper time. If the bees have already been confined for several weeks to the hive by cold weather, they will probably fare as well if they are left outside, as they have already been consuming stores, and their intestines may already be somewhat loaded.

Any good cellar for fruit or vegetables will do to winter bees, provided a corner may be set apart for them and separated from the main cellar by some sort of partition, even if made only of old carpets. There must be ventilation so as to cool the temperature which may become too high, especially if the colonies are strong and numerous. We take them in without the cap or super, and give them both upper and lower ventilation. The hives may be piled on top of each other, using a slat at each end on top of a hive before putting on the next, so that there may be a space between them. We leave the hive-entrance entirely open, and turn this to the wall or towards the darkness, so the bees will not be induced to fly. Darkness is important, and the window, if there is one, should be darkened by a curtain.

A special bee-cellar in which nothing else is kept is certainly desirable, but many bee-keepers can not afford this and yet can well spare room in a good house-cellar.

Nowadays many cellars have a furnace which heats the home. Even such a cellar may be used. We have used one of this description for a number of years with good success, but the bee-room was partitioned off with a 4-inch sawdust partition, so that the bee-cellar could be kept cool while the other part was warm. Such a cellar has the advantage of being very dry, and also of being easily warmed up when the temperature falls too low. But it is the other extreme which is most to be guarded against. From years of experience repeated by others we find that about 40 degrees Fahrenheit is the nearest correct. This may vary a little according to outside temperatures, but the degree at which the bees remain the quietest is correct. A low hum is all that should be heard. When the temperature rises or gets too low the noise increases.

Towards spring a few bees will leave the cluster, from time to time, and fall to the cellar floor after making a vain attempt to escape. Those bees have become restless from some cause, and would disturb the quiet of the others, and it is better for them to die. The loss in this manner will be small.

Nothing is required for the bees left on the summer stands, if they are properly protected. Reducing the entrances according to the requirements of the colony, cleaning the snow from the front, keeping out stock and other outside disturbances will fulfill the conditions necessary for success. Our main reason for wanting the snow cleaned from the front or alighting-board is that the bees may have a clean place to travel on, if the sun gets warm and the snow melts.

Hamilton, Ill.

⁂

Bee-Supply Prices and the Honey-Market

BY DR. G. BOHRER

On page 647, Mr. J. E. Johnson discusses the price of bee-supplies and honey, and assumes the ground that in case 1½-story hives could be purchased for 75 cents each every Tom, Dick and Harry would be in the bee-business: there being, he thinks, so many of this class now, and that many owners of bees bring their honey to market in the worst possible condition, so much so as to injure the price and sale of honey. He thinks that if the price of bee-supplies was so high as to drive this class out of the bee-business it would be a blessing to any community.

That there is a very great want of true knowledge among a large percent of people who own bees, and that there is also a corresponding amount of inexcusable negligence among them, are undeniable facts; but to attempt to remedy this state of affairs by raising the price of bee-supplies can not, and will not, bring success in either the price of honey or the scientific management of honey-bees, in my opinion; and I will suggest that if the opinion is generally prevalent among bee-keepers, that a bee-supply trust exists, or that there is a secret understanding among manufacturers of these supplies to raise the prices of the same, and thereby enable them to reap an unjust, and, consequently, an undue profit, we, the bee-keepers, when in convention assembled, should select a proper committee and instruct them to investigate the facts in the case and report the result of their investigations, and if it is ascertained that an undue profit has been, and is being realized by our bee-supply men, let us take immediate action by either subscribing stock and starting a factory of our own, or by entering into an agreement with some bee-supply factory that will sell us supplies at a fair price. And mark my prediction, Mr. Editor, we will reduce prices inside of 30 days.

I will also suggest that the goods supplied be of good quality, requiring all bottom-boards, landing-boards and followers to be made of substantial material. This I deem a matter of considerable importance. I have quite a number of hives with bottom-boards too thin to permit bees to be moved in safety; and the detachable landing or alighting boards are so thin that they warp to pieces and break down when a quart or two of bees lie out on them or cluster under them; while the followers or division-boards are worthless after once stuck fast with propolis, as they split to pieces when an effort is made to get them out of the hive. In the last hives I purchased I did not make up the followers, as they were not worth nailing together.

I would also suggest that we state to the public in plain language that a hive shallower than the standard Langstroth hive is not by any means a safe hive for a beginner to use in a climate where there is much zero weather, nor for any one else who winters bees on the summer stands, while in a mild climate shallow hives may answer a good purpose.

In the matter of improving the price and sale of honey, let us ascertain by what form honey can be produced and put upon the market in the cheapest and most wholesome form as food. When this has been done, and we, in our advertising efforts set forth the facts plainly, the people will make a note of it, and in time there will be a heavily increased demand for honey all over our country.

"But," says one, "Bohrer believes that extracted honey is the cheapest and most wholesome." But people won't buy it through fear of being imposed upon by the artificial-honey vendor. To head off this danger let every bee-keeper use his or her influence for a pure food law, for without it the sale of honey will be held down in the future as it has been in the past, and as it is now being held down. It won't only be so in the case of extracted honey, but in the case of section comb honey as well.

In addition to all this, let us through our agricultural and local country papers tell the public, and repeat our statements if need be, that artificial honey-comb has never been manufactured, and that the probability is that it never can be. Sheets of beeswax with the bottoms or cell-foundations stamped upon each side is the most advanced step ever taken by man in the manufacture of honey-comb, the cell-walls being so thin and delicate that even if molded the mold could not be removed from the cells without breaking them down.

Let us drop the term "artificial comb honey" in our efforts to educate the people upon this subject, it having no legitimate place in the discussion of the real falsehood to be exposed. The term "artificial honey" was manufactured many years before "artificial comb" was ever talked of, so that the latter is the real question at issue. Let us stick to it. I am not unmindful of the fact that comb honey in the form of so-called "formed sections" is regarded the most attractive form in which honey is produced, but I shall again insist that it is not the cheapest or the most wholesome, and consequently not the best. Let us get the people to know what the best form is, and, in time we may hope, with the support of a strong, pure food law, to see the honey-market problem solved.

I am also free to admit that honey, in order to be acceptable among some of our people, must please the eye; and some say that in the comb and section it is the most attractive. Let such as can not admire or like honey in any other shape have it in the comb. But at the same time let us tell the whole truth, and inform everybody that in the extracted form it is by all odds the cheapest, just as palatable, more wholesome, and it will sell in larger quantities than in any other shape.

Mr. A. I. Root placed the honey-section before the public. Every one saw at a glance that it presented honey in the neatest, most cleanly, and most attractive form, and largely drove from the market bulk-comb honey, the comb of which often contained cocoons and pollen. Yet, as Mr. Johnson says, sections sometimes contain the above-named undesirable and objectionable articles. Lyons, Kans.

⁂

Purity vs. Good Working Qualities in Bees

BY G. M. DOOLITTLE

"IS it needful to have any of the races of bees in their absolute purity to secure the best results in honey? Please answer this in the American Bee Journal, as very many of the readers will be interested in the matter."

Thus writes a correspondent. Were I to answer this in the briefest possible space I should say *No*, making it very emphatic. But I take it that the correspondent wishes to know the whys and wherefores of such a decision, when so much has been said in the past in our bee-papers and elsewhere regarding a standard of purity, it being made to appear that the higher this standard the better the working qualities.

In the first place, I know of no race of bees in this country to-day that are absolutely *pure*, unless I except the black or German race of bees; and these have become so mixed with bees of foreign importation that in most places they have ceased to be identical with the bees of our fathers. The best that can be said of any of the foreign bees, so far as they have come under my observation (and I have had nearly all of them; those from whom I had them claiming that those sent were certainly *pure*) is, that they are a thoroughbred, for there is not one of these claimed pure races but what will "sport" to an extent sufficient to condemn all claims for purity. So it is not necessary to have bees in their "absolute purity" to secure the best results in honey, for an absolute purity can not be obtained in this country, unless, perchance, it is the black bee, and we have for years been claiming that the thoroughbred bees of foreign importation, added to which has come the intellectual breeding of American genius, are much better for honey than the black bees of our fathers.

The breeding of American genius has been along the line of better bees as regards *good qualities*, especially the quality of superior honey-gathering, and the good yields of the present time as compared with a score of years ago, tells how successful they have been. Allow me to illustrate something of this matter from my own experience:

One year during the latter part of May, while changing one colony from the hive it was in to another hive of more recent make, I noticed a fine-looking orange-colored queen with the workers quite evenly marked, and of the same peculiar orange color. A neighbor who kept bees happened along at the time and remarked that he would prefer a darker-colored queen for good business at honey-gathering, and I agreed with him in this decision. No further notice was taken of this colony till about June 25, when the bees were nearly through swarming. This one had not swarmed, but had 60 pounds of section honey nearly ready to come off. On July 3 they gave a fine swarm, which was hived in a new hive. Although the parent colony had none of its queen-cells cut, it never offered to swarm again, and the result at the end of the season was 195 pounds of section honey from the parent, and 114 from the swarm, or 309 pounds from the old colony, all told.

The queen reared in the old hive proved to be as good as the mother, and both colonies wintered with the loss of very few bees, and consumed very little honey when in winter quarters. Then in spring they built up in good shape for the season's work, and showed the same disposition not to swarm till late, each of the two colonies giving nearly one-third more section honey than the average of the rest in the apiary. From this on I reared nearly all my queens from the old one as long as she lived, and found that the majority of them proved as good as did the one reared the first year; they laying the most prolifically just at the right time to bring their bees on the stage of action in the greatest numbers at a time to take advantage of the honey harvest when on, and these bees were great honey-gatherers. These bees were used as the base for breeding, and were really of no known pedigree of stock.

In order to obtain, if possible, something better still, I began procuring queens from persons who reported *good honey-yields*, believing that with these good yields must come good wintering qualities, etc., as no good honey-gathering could possibly come from bees which were deficient in the other things needed as a basis for the thing sought after. Some of the queens bought did not come up to my expectations, and were superseded as soon as proven. Others proved good, some even better, along certain lines, than what I had, and were used to advance the apiary up to a higher standard as to honey-gathering, I never asking regarding the purity of the stock, as the best honey-producers were what I was after.

By this method of crossing I have bred up a strain of bees which please me as to their honey-gathering qualities, although for yellow bands and golden-all-overs there are doubtless bees more pleasing to the eye. And I am still striving to advance these bees further along the honey-gathering line, and I am on the lookout each year to see where anything can be purchased that gives a prospect of furthering this object. And there are many others in the United States and Canada who are working just as faithfully to secure the best bees for honey-gathering as I have been.

Through this disposition to work for the improvement of stock along the honey-gathering line, on the part of the best apiarists of North America, I believe the day is not far distant, if it has not already come, when the bees of America will be conceded to be the *best bees in the world*, with no especial claim to their purity, or of their race or variety, nor from what country their ancestors came. Borodino, N. Y.

Convention Proceedings

OUR TOIL DOTH SWEETEN OTHERS

Report of the Texas Convention

BY LOUIS H. SCHOLL, SEC.

(Continued from page 810)

THE PRODUCTION OF BULK-COMB HONEY.

Mr. Aten has produced bulk-comb honey a long time. He had to have his cans made especially for the purpose in Austin, with a 4 inch screw-cap opening in the regular 60-pound can. The comb had to be cut very small, which made these cans undesirable. Since the 8-inch screw-cap was made the comb honey could be packed very nicely, and when unpacked it came out more easily, and looked fine. This made it ten times more easy to sell a crop of honey, and with a larger profit, as a great demand for such bulk-comb honey was soon created. Besides, the adulteration practiced with extracted honey was done away with to a great extent.

He uses the 10-frame hive 3 stories high in the spring, and 4 stories high later. He lets the bees store in extracting combs first, in the beginning of the flow, until these combs are nearly ready to seal, then he alternates combs by adding frames with foundation between them. He claims that the bees go to work so very much sooner in the full-depth supers when treated in this way than when shallow supers are used in the usual way.

Mr. Victor is not in the comb-honey business now. He used deep supers, but would prefer shallow supers if he were in the business. To have the hive full of hatching brood 10 days before the flow is essential. No excluders are used. It is a good plan to have baits above which help to keep the bees from swarming, as they occupy the new room given them. A shallow extracting super put on early is of much value. The bees store the early honey there instead of crowding it into the brood-nest; the young bees get used to living there, and work in the new supers immediately when given them between the shallow extracting super and the brood-nest. In this way an extra amount of extracted and more comb honey is procured. Shallow supers are decidedly preferable, especially during a slow or short flow, as one or two finished supers of honey can be obtained while the deep ones are not filled. Room should be given *before* the flow is on, and not wait till the flow has begun, so that the first honey goes above and not into the brood-chamber.

Mr. Milam remarked that no two localities nor two seasons are alike, therefore much depends upon the successful production of comb honey. For success a fast flow is necessary. Swarming stops as soon as the bees get the whole idea that they will store honey. He uses excluders and prevents brood-rearing in the new combs. Some bee-keepers claim that these are honey-excluders, but he uses them and keeps the queen in one or more 10-frame hives below. One must study his locality, and then the season is as important as the locality. You can not get comb honey from weak colonies. These are run for extracted honey. Shallow supers are better, as a few supers of honey can be produced on weak colonies when it can not be done with larger, full-depth bodies. He does not like to extract from the brood-chamber.

Mr. Laws—The subject of bulk-comb honey production is a very important one, as bulk-comb honey brings us our money. There is a great demand for this kind of honey.

Mr. Butts is in favor of the shallow frame. All those who have tried them continue to use them, and those who condemn them are those who have never tried them. They don't know it all. Weak colonies are not good for producing comb honey, and should be run for extracted. Extracted honey is needed anyway to pack the comb honey with. He does not get enough extracted honey, and has to buy it from others to pack his comb honey. He tried something new the past season in the way of putting up bulk-comb honey. When he heard of the way The A. I. Root Co. put up cakes of granulated honey wrapped in wax-paper, the idea struck him that comb honey might be put up in much the same way. He packed some of it, but did not ship any. Each comb is wrapped separately in a piece of paraffin paper and then packed in the cans. As there is no liquid honey outside of these separate packages, each comb can be taken out individually in a nice and perfect condition. This is a new idea, and may be worth something to the bee-keepers.

Mr. Hagood stated that bulk-comb honey can be produced successfully only with strong colonies of bees. Good, thrifty queens are all-important. The weak colonies should be managed for extracted honey.

Willie Atchley—The bee-keeper must first study his location and acquaint himself with the honey-flows before anything else in order to be successful. Two full-depth hive-bodies are used for the brood-chamber, and the exchanging of combs of brood and honey from below and above; spreading brood to work the queens for all they are worth, to procure rousing colonies by the time of the flow. When it opens, all the hatching brood is crowded into the lower body and the full-depth supers are put on. The bees take possession at once. In my locality swarming stops when the honey begins to rush in, and there is no danger of swarms during the honey-flow with the method practiced. The remaining brood may be used for new colonies, or with which to strengthen others, or the combs may be used over extracted-honey colonies. If I crowd my colonies down into a single brood-chamber by using excluders, and use only shallow supers, as Mr. Victor and Mr. Milam do, it would take one man for every 100 colonies of bees to keep down swarming. I have had the strong colonies to draw out the foundation and finish a 10-frame full-depth super in 6 days' time.

Mr. Pharr never produced much bulk-comb honey, but he agreed with Mr. Atchley, that one must of necessity "work the queen for all she is worth." Then when the supers are put on, some chunk honey is obtained in a good flow, while extracted is obtained if the flow is light. Bees are loth to go up into shallow supers, and two deep supers of comb honey can be obtained as against three shallow ones. He believes the deep, full-depth bodies are the supers to be used for money, and that is what we are keeping bees for.

Mr. Atchley said that another point brought out in using two full bodies for a brood-chamber in getting rousing colonies of bees, is the ease with which increase can be obtained. When the upper story is removed some brood and bees are left in it, a bottom and cover is put on, a ripe cell or a queen is given, and the newly-made colony is set away on a new stand. This leaves the old colony with the old bees on the old stand in first-class condition for bulk-comb honey.

Mr. Butts winters his bees in two deep bodies, pushes brood rearing in both until the honey-flow, and then shakes them into one below where he places all the brood. When shaking them he handles the bees roughly to cause them to gorge themselves with honey, and as the shallow supers with foundation are added at the same time, they begin comb-building immediately. With deep combs it is hard to get them capped entirely unless you have a good honey-flow.

Mr. Laws handles his bees in deep bodies, two for a brood-chamber, and if one were to watch him he would think that he was trying to do nothing else but to prevent swarming. He scatters the brood throughout two bodies, then compacts it in one at the approach of the flow. Just so the bees are there when the flow comes the bulk-comb honey will be obtained all right.

Mr. Bell tried both shallow and deep supers. If he would use the shallow supers he would use them from the ground up, as he does not like two different depths or sizes of hives in a yard. The first thing is to produce the bees—then there must be the honey, of course.

(Continued next week.)

Report of the Chicago-Northwestern Bee-Keepers' Convention, held at Chicago, Ill., Nov. 30 and Dec. 1, 1904

(Continued from page 810.)

SWEET CLOVER HONEY.

"What are the objections, if any, to honey produced from sweet clover?"

Mr. Horstmann—There is no objection. That is the best honey produced.

Pres. York—The only objection then, is, that we don't get enough of it!

Mr. Colburn—I have heard the suggestion that it was not as good as white clover honey. I have been in localities where I got both, and I confess I like the white best. The sweet clover is very fine—it is very far ahead of anything else in looks, but I don't think the quality is as good as the white clover. If you can get it mixed it is good.

Mr. Becker—I think sweet clover is all right, providing there is no other honey with it. I have had experience with sweet clover. We don't get it pure in our neighborhood. Whenever we take it to Springfield we have to have our sales made before we get there to get rid of it. They don't like it in that locality. I bought some from Mr. York, four or five years ago, when there was no honey at all in our part of the country, not even an ounce, and I took it down to the State fair to make my exhibit, and then sold it out; and the store keepers who sold the honey use to tell me, "Becker, you have ruined my honey-trade." They said, "That isn't honey."

Pres. York—Didn't you get a premium on that honey?

Mr. Becker—Yes. [Laughter.]

Mr. Kannenberg—I think it depends a good deal man that sells the honey, and how to educate the to taste the honey. I think if Mr. Becker educat people to get the honey they liked they would eat the same.

Pres. York—Probably there is not enough of it

Mr. Colburn—I have in my place three differ of honey. There is another kind of honey I have had put into sections and supers; I don't know what source it comes from. It is white, though not snow-white like sweet clover; it has a slightly muddy tint. That honey has no more flavor to it than so much sugar syrup. As soon as I discovered it I stopped selling it, because I said everybody that tastes that will swear it is sugar syrup and nothing else. I would like to know if anybody else has had any experience with it. I think it comes about between white clover and spring clover.

Mr. Meredith—Is it honey-dew?

Mr. Opfer—Here is a bottle of sweet clover honey, and I would like anybody in the audience to show better honey than this. It depends a good deal on the man that produces the sweet clover honey in my opinion.

Pres. York—I am satisfied that Mr. Opfer's sample is pure sweet clover honey. I have had lots of it.

Mr. Moore—I would like to say a word on this honey question. I sold to my customers some sweet clover honey in Chicago, seven or eight years ago, and it is only recently I have gotten away from the effects of it. Any one who asks which is best, I say, "There is no best; it is simply a question of what you are used to." This market is used to clover and basswood flavors. They get their honey from Illinois, Iowa, Wisconsin and Michigan, where the preponderance is white clover and basswood. I know a majority will have sweet clover honey. Where they get to like it, it is liked as well as anything else. But this honey question is purely a matter of taste. They want what they have all their lives been used to, and they will absolutely condemn and call impure anything else.

Mr. Becker—As far as sweet clover honey is concerned, I have no objection whatever; it is a very fine honey. But when you take out a section of sweet clover honey there is the peculiar smell to it that is not in any other honey, and I think that is the part that people do not like. When you taste the honey it is as fine tasting as any honey, but it has that peculiar smell that you can smell in the growing sweet clover a hundred yards off before you reach it.

LABELING SECTION HONEY.

"What might be the disadvantage of a label covering all four sides of a section, printed matter being on all four sides?"

Mr. Fluegge—I should think it would be daubbed up with honey and get soiled.

Mr. Wilcox—Retail dealers might not like it, and that is a serious objection. They won't want to advertise your honey for you, by distributing it among their customers; they would sooner order direct from the producer.

Pres. York—I take it that the questioner means printed matter concerning the production of honey, or proof of the purity, and not as an advertising card.

Mr. Wilcox—I see no necessity for any printed matter on comb honey unless your name is on it as a guaranty of purity.

Pres. York—At the St. Louis convention the question was asked whether it might be well to print something right on the wood of the sections by the manufacturers, calling attention to the fact that there is no such thing as manufactured comb honey, or something of that kind. But I doubt if people would stop to read it, anyway. Take the cities where most of the comb honey is sold, the servant girls get it, and I don't think they would stop to read anything printed on the sections. Still, they might.

Mr. Moore—It seems to me if any one wants to put printed matter on it, the carton is the very best method, and you can print them all over, and as much of it will be read as any other printed matter we send out.

(Continued next week.)

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

A New York Woman's Report

Dear Miss Wilson:—As you have requested the sisters to send reports of last season's work, I comply.

I put up 8 colonies last fall, well packed, and also well provided with stores. I lost 3 in wintering, and got a fair crop from the 5—about 175 pounds—mostly white clover, beautifully white, and well filled out. It was taken off in July. I lost 2 swarms and sold 1 nucleus. I bought and introduced an Italian queen from Texas, which proved to be excellent, her bees very gentle, and they cap their honey white. I have 7 colonies now put up heavy with honey, and need no feeding; they are packed in chaff outdoors.

So far my experience is pleasant, but I must tell of my fatal mistake in neglecting to sulphur or fumigate the honey after taking it off. It is a painful experience to find half of such lovely honey ruined by moths. But we learn by our mistakes.

I see Dr. Miller recommends using bisulphide of carbon, 3 or 4 tablespoonfuls for 100 pounds of honey. I shall use it next year.

Poughkeepsie, N. Y. Sarah E. Wiley.

A Woman Bee-Keeper's Political Prospects

It appears that honors undesired have been thrust upon a bee-keeping sister out in Nebraska—Mrs. A. L. Amos. Her letter declining the nomination for county superintendent of schools appears in the Custer County Beacon. No little time has been spent trying to decide just what part of her letter should be given to the readers of this department, but the whole letter is so bright and interesting that it has finally been decided to give it entire, with apologies to the editor for occupying so much space with something that is not at all about bees. It thows evident content with a bee-keeper's lot, and at the same time the frankness with which possibilities in the future are mentioned is commended to politicians of the sterner sex. The letter follows:

A Patriotic Letter.

Mr. Editor:—Will it be considered taking oneself too seriously if I notice for a moment that my name has been mentioned as a possible nominee for county superintendent? Is it something that I should smile over and pass by?

I have been wondering how, secluded in my hermitage here, I could be thought of for a moment in this connection. I, who don't "know the ropes" by which to climb to any office; I, who find my life so full that I have not time to be director in my own school district.

Friends, I thank you for the honor of a passing consideration. I gave to teaching school in this and adjoining counties 10 of the best years of my life. They were pleasant years, too.

I don't say that if called to an office of this kind some time in the future I would not accept and give to it my best effort, but the time now is inopportune. My three little maids need me at home. There is no place like the country for children. Let them grow to be healthy little animals before they are anything else. They are too young for me to think for a moment that I might change the even tenor of my way.

Friends, I find life worth while here! "Far from the madding crowd's ignoble strife." On this farm, the gift of "Uncle Sam," I have achieved some triumphs. The trees have grown large enough to support a hammock and furnish shade overhead, and when the thermometer ranges 90 degrees and upwards, I can lounge a little with book and paper within hearing of the busy hum of industry from the bee-hives close at hand. There is another of my triumphs. I am not a bee-keeper merely, but a bee-master, since I bend the little creatures to my will, and have shown that honey can be produced abundantly in Custer County.

I have seen apple-trees grow from saplings to great trees, bending with their loads of health-giving fruit. I am very close to Nature here, and "Nature never did betray the heart that loved her."

Friends, I promise you that I will try to grow so that if the time does come when I can leave, and you see fit to call me, I may be ready. But I tell you that I am no politician, and will pull no wires. Withal, I am "a canny Scot," and realize that I might get hold of the wrong one—a live wire, for instance!

This is much for me to write at this season of the year. Success to the other fellow!

[Mrs.] A. L. Amos.

The Truth About Honey.—A few changes have been made in the reading of the Comb Honey Guarantee Circular for shipping-cases gotten up by The Honey-Producers' League, so that it will be suitable for bee-keepers to use in their correspondence, putting one in with every letter they write. It is headed, "The Truth About Honey," and is printed on both sides of a light manilla cardboard. It is sent postpaid in lots of 50 for 10 cents, 100 for 20 cents, etc. Every bee-keeper should use it, as it will undoubtedly help to popularize the use of honey.

The Guarantee Circulars for putting in shipping-cases should be used by every bee-keeper who sells comb honey by the case. These circulars are the same price—10 cents for 50 copies, postpaid. Send all orders to the American Bee Journal office.

Comb Honey Guarantee Circulars.—These were gotten up by The Honey-Producers' League, to be put into shipping-cases before nailing them up for market. They are mailed for only 10 cents for 50—practically cost price. Every bee-keeper who has any honey to sell by the case should use these circulars. They will help to inspire confidence in the genuineness of comb honey. Send all orders to this office.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

Inspectors of Apiaries.

That was a remarkable and luminous sentence of Inspector France's where he said, "As soon as we can get the people educated I question if we will need any inspectors." And no doubt he would admit also that with people as ignorant and indifferent as some are now, the best of inspectors find it pretty hard to clean up territory. Page 729.

The Funny Man's Prunes and Honey.

The funny man's attacks upon prunes do some good as well as harm—in that some people would never know of the existence of such things as prunes but for the funny man. Results: Curiosity—a trial—a decision that we must have some more. Alas, we can not have that kind of salve for the sore that the funny man has inflicted on us! Folks all know already that there is such a thing as honey, and that it is good; but that funny man at Washington, and others who have followed in his wake, have convinced an awful lot of them—not that honey is not good—but that our sections are not genuine.

Undeniable that that paper on page 743 is a powerful one—also that *how* to prevent members from using the League's mark to sell poor, unripe honey is a "powerful" problem.

All Full or Some Empty Comb for Winter.

More idol smashing, eh? The dictum that a colony needs some empty comb to be a central core for a winter nest is ably attacked by J. L. Byer, on page 744. I prefer to keep Mr. B.'s theory a little separate from his experience. His experience that bees winter tiptop on 5 solid, sealed combs—let that stand without any discount. But it's tolerably plain that the bees themselves (if given their choice) would choose the same honey in 6 combs, and the 4 interior ones one-quarter empty at the bottom front. May it not be that the bees know best, after all? I am not pleading for any great amount of empty comb, but for a little. Neither am I denying that combs with only 3 inches of honey at the top are worse than solid ones. In the bees' own way they can and do form a practically solid central mass by crawling into the cells. With the Byer method they can not do that way to start in with. We may sincerely deplore the scatteration of the winter supply through 10 or 12 big combs without jumping to the conclusion that it is the *best* way to have the cluster widely divided into 4 slices less than half an inch thick.

Darker Color of Bait-Section Honey.

W. N. Root wonders at his bait-sections being darker color than the rest. That they partly fill the bait-section before the white honey begins to come, is, I think, the commonest reason. The fact that old comb can not be quite as white as new helps in the same direction. And I think that dark, old honey moved from below is pretty often put in the bait. Page 749.

Don't Be a "Putty-Head."

Be not pliable as putty; but be open to solid reasoning. This maxim (arranged from R. F. Holtermann) applies at other places besides conventions. Need it at home. Need it very badly when you read the Journal. Page 757.

Crackless Cakes of Beeswax.

It's sometimes advised to let your cakes of wax get as full of cracks as ever they have a mind to get. "Cause why?" Buyers know that pure wax cracks worse than the adulterated article. A lot of fine, uncracked cakes all looking just alike is a look-out warning. If you have a good reputation and sell to some one you are acquainted with, then you may take a little pains to have the cakes look nice. Should doubt a little whether continued dipping during the process of cooling would make quite as nice-looking cakes as the slow-cooling method. Page 759.

Enclosing Out-Apiary Grounds.

Out-apiary ground a rectangle 100x25 feet. Two lengths of board hurdle on the north and same on the south. On the long east and west sides wooden posts well set, and supplied with an extra number of barbed wires. Hives set so near the wires that no grass and weeds can grow between—the whole to be in a pasture lot, that the stock may be intrusted with keeping the entrances clear. Move a board-length and drive in when you bring the bees. Pitch the extracting tent inside. (Look out you don't tear your never-whisper-'ems on the barbs as you manipulate.) To drum for another objection, possibly in some cases the land-owner may be less inclined to let you come if you ask to set permanent posts. Page 758.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal,
or to Dr. C. C. Miller, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Bees Refusing to Leave a Super for Winter

The first cold spell we had I took the supers off of all my hives but one, and the bees were in the super and on top of the frames, and I could not get them to go down into the hive. Smoking did no good. One very cold day I took the super off, and there were lots of bees in it, also on top of the frames, and they remained there. I believe they would have frozen had I not put the super back. What is the cause of them acting in that manner? We had no swarms the past season. Could it be possible that the hive is so full of bees that there is no room for those that were filling the super? The bees stored no honey to amount to much since the first of July. They did splendidly up to that time. Missouri.

Answer.—If the brood-chamber was filled with bees, and the super as well, it was merely because the colony was strong. The trouble was that you operated when it was so cold that the bees would not move. Take them on a day when it is warm enough for bees to fly freely and you will find it another story. If smoke does not readily get them down, you might take out the contents of the super and brush the bees down upon the top-bars of the brood-frames. Another way is to take the cover off, leaving the super bare, then wedge up one end of the super half an inch to an inch, and the bees in the super will find it so chilly that they will go down into warmer quarters. Of course, it will not answer to do this when it is so warm that robbing will be started, although it will be better for being warm if the work is done late enough in the day to avoid robbing. Likely enough there will be no need to wedge up one end of the super; merely uncovering may be enough to make the bees go down; and if it is very cold, wedging up one end would be just the thing to defeat your purpose, for the open space between hive and super might make the bees in the super shrink upwards rather than downwards.

Registering a Honey Trade-Mark

How can a trade-mark be obtained for labeling honey when working up a trade? Minnesota.

Answer.—A trade-mark is registered by the Government at Washington, D.C., in order to be able to protect it in case of infringement or copying. For the details to be followed in securing such registry, better consult a good lawyer.

Candy for Winter Stores

As I have some colonies of bees light in stores, how can I make candy out of granulated sugar to carry them through the winter? Indiana.

Answer.—That's one of the questions that hardly belongs in this department, as the answer ought to be found in your bee-book; but I'll answer it anyhow.

You can make Scholz or Good candy, but the probability is you have not the extracted honey, so all you need to do is to make just plain sugar candy. Into a vessel of boiling water on the stove, stir 2 or 3 times as much sugar, and let it cook until a bit of it dropped into cold water appears brittle; then pour out into greased dishes so as to make cakes half an inch to an inch in thickness. These cakes may be laid on top of the frames and then covered up any way to keep snug and close, so the bees will go up to them; for if too cold the bees will not leave the cluster to reach them, and starve with abundance in the hive. Then promise yourself you'll not be caught that way again, but will have plenty of combs of sealed honey each fall to meet any emergency.

Killing Drones—Prevention of Increase—Supering—Feeding Bees

1. In killing drones, how do I know when to kill them, and how many to kill? Should I kill them all, or how many should there be in the colony in order to fertilize the queen? Should they be killed in spring and fall?

2. After I get one swarm of bees from each colony next spring, what is the best way to stop them from increasing any more, and store some surplus honey?

3. How often shall I cut out cells and examine the bees in the summer time?

4. Which is better, to put one super on at a time, or two? Why?

5. How can I see which colonies are to be fed in spring, and how much to feed them before they have enough? I have a Doolittle feeder. Is this the best kind?

6. How do I know when to put on an Alley queen-trap in time to catch the swarm, as much of my time is devoted to the field-work and I am not at home very often in the daytime. Wisconsin.

Answers.—1. You can kill all you please, and whenever you please, and there will be little danger of there being any too few left. As in most cases you will find that in this case prevention is better than cure, so the best way is to see that there is little or no drone-comb in your hives, and then there will be few or no drones reared. A single drone is all that is needed for each young queen; but when you have done your best at repression you'll find you will still have hundreds left. While you are about the business of preventing drones, it may be well for you to take especial pains to have no drones reared in colonies that are below the average in character, and encourage their presence in a few of your very best honey-gathering colonies. In that way you will be doing something to improve the character of your stock.

2. When the prime swarm issues, hive it and set the hive on the stand of the mother colony, setting the mother colony close beside it, both facing the same way. A week later, move the old colony to a new place some distance away—10 feet or more. That is all you need do; the bees will do the rest. For the field-bees from the mother colony will all join the swarm, leaving the old colony so discouraged that all thought of swarming will generally be abandoned.

3. About once in 10 days; but remember that cutting out cells will not make sure work of preventing swarming. It will generally only postpone it.

4. One; there is no advantage in two; and the disadvantage that the bees must keep warm empty space unnecessarily.

5. Find out by actual inspection; lift out the frames and see how much honey is present; then give them quite a bit more than you think they need. After they begin flying in spring, 5 pounds of honey may carry them through to the harvest, but if you give them 10 it will not be wasted.

6. Put on queen-traps as soon as you think there is any danger of swarming; in your part of Wisconsin it will probably be about as soon as white clover begins to bloom.

"Combed" and "Extracted"

Why Some Bee-Keepers Succeed and Some Do Not

I am asked every now and then why so many people go out of the bee-business every year. In the first place, I do not admit the implied condition of affairs as stated in the question. They say to me that the bee-business can not be a very profitable one or it must have a great many more unusal drawbacks than most other kinds of business. I do not believe the number of those who drop out of the bee-business is any greater in proportion than in many other lines of trade in the mercantile world. It must be remembered that hundreds of people become interested in honey-producing and queen-breeding each year, and they represent all classes and characters of humanity, from the school-boy to the aged invalid. Many of them have made failures in numerous callings of life, hence they are attracted to the bee-business and think it a very easy one; and the result is, another failure to be recorded in the chapter of misfortune. Those who go into the bee-business with this idea seldom succeed, because they are woefully ignorant in regard to the elements necessary to success, and are not willing to give the work the attention and money which it ofttimes needs.

Looking at the bee-business from the view of dollars and cents, it should be borne in mind that capital and experience are necessary for success unless one is willing to start in a small way and is satisfied to wait till the business can be established on a paying basis, which can not be done in one season. I know of no other vocation in which those interested expect as great returns in so short a time, and with so little outlay, as with the honey-bee. They seem to look on it as an easy, get-rich-quick proposition—that the bees board themselves and work for nothing, and they are to take in the proceeds thereof; then if their expectation is not fulfilled they are quite apt to condemn the business because this class of people have failed at it. On the other hand, investigation shows that the man and not the bees are at fault. Many who become interested as queen-breeders, either as a fad or for profit, do so with a very faint idea of what is required to reach the point at which they are aiming. The greatest stumbling-block is their lack of knowledge of the principles of queen-breeding.

This need not be the case, because we can all learn; but the trouble with many lies in their unwillingness to learn. I know people who take the bee-journals but never read them. I also know others who keep bees and will not take a bee-journal. They either ridicule the idea of any special study being required, or they are too tired mentally to become sufficiently interested. History repeats itself again, and another man goes out of the bee-business. The fact of the matter is, the bee-business is a full-fledged one, worthy of the talent and time of our best men and women, both of whom must have a certain degree of intelligence and business judgment, and, unfortunately, there are many people who get into the bee-business who do not fit this description; and, in short, the bee-keeping fraternity asked what made them go out. If every one who goes into the bee-business were successful it would be utterly impossible for the business to have reached its present magnitude. Make up your mind what your circumstances will permit you to do, and live up to your determination at any cost. Your will-power depends upon it.

Thousands of little bee-plants and a few big ones sprang up with the green of last spring; and thousands of little bee-plants and a few big ones will go down with the same green, under the frost and ice this winter. Whether your little enterprise will hardly survive the gray, cold winter, and be ready and eager to flourish again in the spring, or be steeped in destitution, and be set down as a failure, remains entirely with you. Why not obey conscience and tell the truth? The old adage, "There is no royal road to success," applies to the bee-business just as well as to the other vocations in life.—C. E. WOODWARD, in Gleanings in Bee-Culture.

A System of Comb-Honey Production

To the veterans there may be nothing new in what I am about to tell, but the beginner may get some hints. The system that I am about to describe is one that I followed for years, hence it will be practice instead of theory that will be given.

When the yield comes on from white clover the brood-nests become crowded, and the bees begin to whiten the upper edges of their combs with new wax, I put on the supers with bait-sections saved over from the previous year. As soon as the first super is from ½ to ⅔ full, I raise it and put under it another super with sections full of foundation. When the super last added is about half completed, I raise both supers and put another next the hive. Usually, by the time the third super is half full, the top one is finished, or sufficiently so to be taken off. I would remove it even if one or two sections in each corner were not quite complete. These partly finished sections I would put into a super until I had one full, when I would give it back to the bees.

This method of tiering-up is continued until the end of the season. As the season draws to a close, I am careful about giving too much super-room. If I feel that a colony ought to have more room, I put another super on top. The bees will go on and complete the sections next the hive, just about the same as though the super had not been added on top, and, if the flow does continue, it will overflow into this upper super.

When a colony swarms it is hived in a contracted brood-nest on the old stand, and the supers transferred from the old hive to the new. Only 5 Langstroth frames are used in the brood-nest, or only one section of the Heddon hive, and starters only are used in the frames, a queen-excluder keeping the queen out of the sections. If such severe contraction causes swarming-out, I give a full-sized brood-nest for 3 or 4 days until the swarming-fever has worn off, when the contraction is put in force. The old colony is placed by the side of the swarm for a week and then moved to a new location. Usually this prevents after-swarms, and helps to boom the colony where the sections are. If the swarm comes off early in the season, it is possible that the old colony will store some surplus, otherwise it becomes a most excellent colony for wintering, having abundance of good stores, and a young, vigorous queen.

At the end of the season I unite the colonies that have been contracted. In this way, we get one colony of increase from two colonies, and all of the white honey in the supers where it can be sold at the highest price.—W. Z. HUTCHINSON, in the Bee-Keepers' Review.

Reports and Experiences

Honey Crop a Failure

The honey crop is a total failure here this year. Some bee-keepers had to feed sugar to keep their bees alive. From 1500 colonies I did not have 1000 pounds of surplus honey. It was the very worst season I have experienced in the 15 years of my bee-keeping.

BERT W. HOPPER.

Rocky Ford, Colo., Nov. 14.

Amount of Winter Stores

I note what Mr. C. P. Dadant says, on page 759, about 5 to 10 pounds of honey to winter a colony. I would be pleased to winter mine on 10 pounds, but perhaps he means barely to survive the winter. Still, I think it insufficient; at any rate, in any part of New England. Of course, if we have a very light colony it might be all right, but with an ordinary sized one I would not dare to risk it. I have always wintered my bees in the cellar, so I speak from that.

I want at least 20 pounds, and then I find that, when spring comes, before they can gather anything there is very little left, and sometimes I have to feed. Our winters, I suppose, are more severe than Mr. Dadant's, and that may account for it, but that will knock some of our theories in the head where the bees consume 200 or 300 pounds per colony in a year.

In putting my bees in the cellar last fall, I had 6 light colonies that I placed on top of the rest, where I could watch them, and I do not think any one of them had over 10 pounds. About the middle of February I placed a pound section of honey on each, and two of them worked up to it immediately, which showed they were about out; the others came later. With the first two I gave three more sections, and when I set them out the last of March it was nearly gone, and I found no honey in the hive below.

My cellar is under the house, and the bees in a room partitioned off purposely, and always warm, as there is a furnace near by.

Let me have at least 20 pounds of good winter stores for mine; it is none too much in this "locality" where bees are in the cellar from 4 to 5 months; and if they should have a little left, it will all be needed before fruit-bloom arrives. I always think it is safer to err on the right side than to be always wondering if the bees have enough to get through with, or how many I am going to lose for want of stores.

A. W. YATES.

Hartford, Conn., Nov. 7.

A Variety of Wormwood

I enclose a sprig of a plant which grows all over the mountains in this section. It is in bloom during May, June, and into July. This sample was taken to-day (Nov. 4), and it was in bloom. Bees work on it when in bloom. What is it? Is it a good honey-producing plant?

W. A. PRICE.

Railroad Flat, Calif.

[The plant you send is a variety of the wormwood, I think, but I am not able to tell the species, or whether it is a good honey-plant. As bees generally work where they can get honey, it is safe to say that this is all right; but possibly a little strong, owing to the pungent odor of the plant. — C. L. WALTON.]

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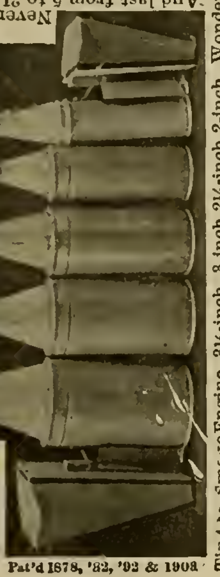
Apiary Positions Wanted

I wish to hear from those who hire help in the apiary, as my daughter (17) and I would like a position the coming season. Experience of 10 years. States preferred, Oregon and California.

Address, MRS. I. J. HENRY,
48A1t Rt. 1. Braddyville, Iowa.



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Tin 4-in. SmokeEngine 3½-inch 3-inch 2½-inch 2-inch Wonder
$1.50. $1.10. $1.00. 90c. 65c—per mail.
Sent on receipt of price per mail.
T. F. BINGHAM Farwell, Mich.

OTISVILLE, PA., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. FRED FODNER.

DEATH TO LICE.

LOSS BY LICE

on poultry amounts to many times the cost of **Lambert's Death to Lice**—the sure preventive. Loss can be saved and profit made by its use. Frees sitting hens from lice without harming eggs or chicks. A trial 10c box will prove it. 100 oz., by express, $1.00.

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12.80 For 200 Egg INCUBATOR
Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day
GEO. H. STAHL, Quincy, Ill.

44A26t Please mention the Bee Journal.

CONVENTION NOTICES.

National Convention, Dec. 19, 20, 21.—Another slight postponement of the National convention seems to be unavoidable. The Fat Stock Show, upon which we have depended for reduced rates on the railroads, has been postponed two weeks. The reason given is "the inability of the builders of the amphitheater to secure structural steel for the same," and they don't wish to hold the show out-of-doors, hence the delay. Of course there will be no excursion rates during the first week in December, and, as it would be suicidal to attempt to hold a convention without excursion rates, the Executive Committee has decided to postpone the convention two weeks in order to take advantage of the Fat Stock Show rates. The dates for the convention will now be Dec. 19, 20 and 21, 1905.

The place of meeting has also been changed to Brunt Hall, in the Bush Temple of Music, corner of North Clark Street and Chicago Avenue (entrance on Clark Street.) This was done because it was feared that the accommodations at the Revere House might prove too limited. The Chicago bee-keepers, with their customary enterprise and liberality, will pay for the use of the Hall. It is only 5 minutes walk north from the Revere House, Southeast corner N. Clark and Michigan Sts., which will be headquarters for the members. This new place of meeting is in a new building where everything is modern. There are adjoining committee rooms, toilet rooms, good drinking water, and elevator service both day and night.

W. Z. HUTCHINSON, *Sec.*

The Chicago-Northwestern Bee-Keepers' Association will hold a social session at the Revere House, Dec. 19, 1905, at 10 a.m. At 2 p.m. the same day will be held the regular annual election of officers. Any other business coming before the meeting will be attended to. All who are accustomed to paying their dues to our Association, thereby getting two memberships for the price of one, will please hand the $1 to the secretary, or mail it to him as usual. The time in the evening will be given to the National, as will also the whole of the two following days. Every one is cordially invited to be present, both at the short sessions of the Chicago-Northwestern, and at the 7-session meeting of the National Association.

HERMAN F. MOORE, Sec.
Park Ridge, Ill.

N. B.—Any one paying their dues to the National Association *direct*, will have to pay another dollar to the Chicago-Northwestern, if it is desired to be a member of the latter organization also. Hand your dues to H. F. Moore, the Secretary. H. F. M.

New York Bee-Keepers' Institutes.—A series have been arranged to be held in New York State as follows: Amsterdam, Dec. 11, 1905; Syracuse, Dec. 12; Watertown, Dec. 13; Fulton, Dec. 14; Auburn, Dec. 15; Romulus, Dec. 16; Geneva, Dec. 18 and 19. Dr. E. F. Phillips, Acting in Charge of Apiculture, United States Department of Agriculture, will attend and address these Institutes on subjects pertaining to bee-keeping.

Romulus, N. Y. C. B. HOWARD, Sec.

Minnesota.—On account of the change in time of holding the National Convention at Chicago, the Minnesota State Bee-Keepers' Association has decided to hold its annual convention as usual—Dec. 6 and 7, 1905, in the First Unitarian Church, in St. Paul.

MRS. W. S. WINGATE, Sec.

The New York State Association of Bee-Keepers' Societies will hold its annual meeting at Geneva, N. Y., at the Nester Hotel, Monday and Tuesday, Dec. 18 and 19, 1905. New and interesting subjects are to be introduced and discussed at this meeting, and all bee-keepers of New York State should make arrangements to be present. Good and reasonable accommodations have been secured. Headquarters will be at the Nester Hotel.

Romulus, N. Y. C. B. HOWARD, Sec.

New York.—A Bee-Keepers' Institute will be held in the parlor of the Central Hotel, Market Street, Amsterdam, N. Y., on Monday, Dec. 11, 1905. This meeting will be held under the direction of the Bureau of Farmers' Institutes of New York State Department of Agriculture, by the Fulton and Montgomery Counties Bee-Keepers' Society, assisted by the United States Department of Agriculture. Dr. E. F. Philips, Acting in Charge of Apiculture United States Department of Agriculture, is expected to be present and address this meeting, and a good attendance is much desired. T. I. DUGDALE, Sec.
West Galway, N. Y.

Glass Jars for Honey

We can ship by **return freight** at the following prices:

½-lb. Tip-Top Jars—case of 24 doz., $8.00; 3 cases, $23.00.

¾-lb. Tiptop Jars—1 case of 14 doz., for $5.25; 3 cases for $15.

1-lb. Tiptop Jars—1 case of 12 doz., for $5; 3 cases for $14.

Second Hand... Comb Foundation Mill

We have for sale a 6-inch Second-Hand Comb Foundation Mill. Used scarcely any; good as new. If interested write for price.

50 boxes good 2nd-hand 5-gal. Tin Cans, 2 in a box—10 boxes for $4.00.

When sending for sample jars include 15 cents each to cover postage, etc.

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Cash Orders for regular Supplies before January, 7 percent Discount.

FINE EXTRACTED HONEY in cans or barrels. The best the world can produce. Samples 8 cents, to pay postage and packing. How much can you use? Prices quoted quick on the quantity you mention.

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We Sell Root's Goods in Michigan
Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.
M. H. HUNT & SON,
Bell Branch, Wayne Co., Mich

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A $4.00 Clock for $2.50

With the Weekly American Bee Journal 1 year—all for only $3.

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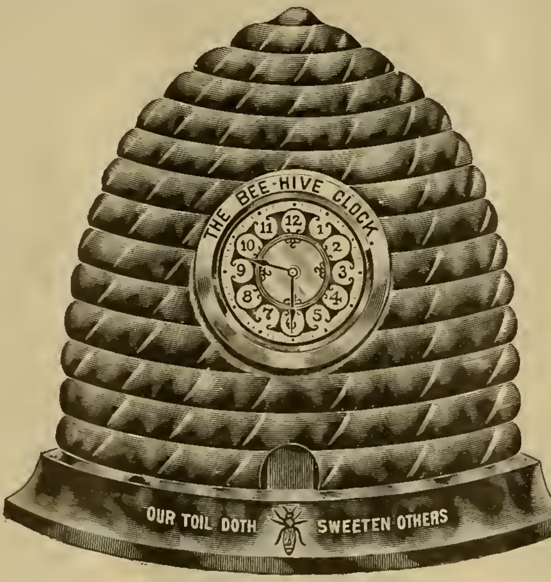

Ought to be in the Home of every Bee-Keeper in the Land

THE BEE-HIVE CLOCK

Only $2.50, f.o.b. Chicago, by express. Weight, with packing, about 4 lbs. Ready for delivery Dec. 15.

We have had made specially for our readers, a bronze-metal Clock, called "The Bee-Hive Clock." It is about 8 inches wide at the base, about 10 inches high, and deep enough at the base to stand firmly on a mantel or elsewhere. It is a beautiful piece of work, and would be both ornamental and very useful in any house, and particularly in a bee-keeper's home.

The clock part itself is warranted for 3 years to keep good time. So it is no plaything, but a beautiful and needful article for everybody.

Clocks like "The Bee-Hive Clock" usually sell in the stores at from $4.00 to $5.00 each, but having them made for us in large quantities enables us to offer them at $2 50 each by express, or with the Weekly American Bee Journal a year—both for only $3.00. Either Clock or Journal would make an ideal gift.

We expect to begin filling orders by Dec. 15, 1905, so the Clocks will arrive at destinations in time for Christmas, if so desired. Here is something that surely is appropriate for bee-keepers—"The Bee-Hive Clock." Better get your order in quick—first come first served out of the first lot of Clocks.

☞ Sample copy of the Weekly American Bee Journal free.

Send all orders to **GEORGE W. YORK & CO.,**
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Remember, we expect to begin to fill Clock orders Dec. 15, so as to have them reach those who order in good time for Christmas.

FOR SALE HONEY-JARS

The No. 25 Honey-Jar, Porcelain Cover, Metal Screw Cap, absolutely tight, holding One Pound of Honey, Net, in shipping-cases of one gross each:

1 gross lots	$4.50 per gross
5 " "	4.00 "

Also in strong **RE-SHIPPING CASES** of two dozen each, heavy corrugated partitions, sides, top and bottom—a perfect protection—

1 case lots	$1.00 per case
5 "	.95 "
10 "	.90 "

Eight-ounce Tumblers, tin caps, 3 dozen in re-shipping case:

5 case lots, per case, 3 doz	85c
10 " " "	80c
20 " " "	75c

F.O.B. New York. Prompt shipment on receipt of order.

HILDRETH & SEGELKEN,
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FOR SALE

Until further notice, finest quality new crop California Water-White White Sage and Light Amber **HONEY** in 60-lb. tins, 2 in a case; new cans and new cases Write for prices and samples, and state quantity you want.
Hildreth & Segelken
265 & 267 Greenwich Street, New York, N.Y
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New Comb Honey-Crop of 1905

We believe it would pay those having it in car lots or otherwise to write us. Give us your lowest spot cash prices, and fully describe the goods and style of package; when you can ship, etc. We handle more of these goods than any other firm in the U.S. Yours for business,
THOS. C. STANLEY & SON, Bees and Honey
Manzanola, Colo., and Fairfield, Ill.
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WANTED

Fancy White Comb Honey in Non-Drip Shipping-Cases; also White Clover Honey in cans and barrels. Please send samples and state your lowest price, delivered here. We pay **spot cash** upon receipt of goods.

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The following discounts apply on all orders except honey-packages for current use:

For cash orders before Oct. 1—10 percent

Nov. 1	9 percent	Feb. 1	6 percent
Dec. 1	8 "	March 1	4 "
Jan. 1	7 "	April 1	2 "

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We have a good supply of **Pure Alfalfa HONEY** in 60-pound cans that we can ship by return freight at these prices: 2 cans, boxed, at 8½ cents a pound; 4 or more cans at one time, 8 cents a pound—all f.o.b. Chicago. Cash with order. Sample, by mail, 8 in stamps, to cover package and postage.
Address,

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" March 1	4 "
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Freight rates from Cincinnati are the lowest,
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For Cash Orders Received in

DECEMBER

This applies to all goods with exception of Shipping-Cases and other Honey-Packages for current use.

At Root's Factory Prices

C. H. W. WEBER CINCINNATI ...OHIO...
Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

Honey and Beeswax

Chicago, Nov. 17.—There has been a steady trade in honey to the small dealers who usually lay in a little stock at this time of the year. Prices are practically unchanged. The fancy grades of white comb bring 14@15c; that which is a little off 1@2c less; amber grades, 10@12c; dark and damaged lots, 7@10 cents. Extracted, white. 6@7½c; amber, 6@7c. Beeswax steady at 30c.
R. A. Burnett & Co.

Kansas City, Oct. 9.—The honey market here at present is very strong at $3.25 per case for No. 1 and fancy white comb in 24-section cases; amber and other grades selling for less according to quality. Extracted in good demand at 6½c. Beeswax, 28c.
C. C. Clemons & Co.

Cincinnati, Nov. 24.—The demand for comb honey is relaxing to some extent, owing to the majority of the trade being well supplied. All fears of a comb honey famine have been allayed. We quote fancy white comb honey at 14@16c. Extracted honey is in fair demand. Quote amber at 5¼@6½c, according to the package and quality. Fancy white and white clover extracted at 6½@8½c. We are paying 28½c per pound delivered here for choice yellow beeswax.

(We wish to call the attention of the producer to the above honey quotations, who mistakably expects to receive these prices for his product. The above are our selling prices.)
The Fred W. Muth Co.

Toledo, Oct. 17—The honey market remains firm, with good demand, and prices the same as last quotations. Fancy white comb brings 15c; No. 1, 14c; fancy amber, 13c; buckwheat, 13c. Extracted, white clover, in barrels, 6¼@6½c; amber, in barrels, 5@5¼c; in cans, 1c to 1½c higher. Beeswax in good demand, 26c cash, 28c trade.
Griggs Bros.

New York, Nov. 17.—There is a fair demand for all grades of white as well as buckwheat, and receipts are about sufficient to meet the demand. Prices are unchanged. We quote: Fancy white, at 14@15c: No. 1, at 12@13c; amber, at 11@12c; buckwheat, at 10@11 cents. Extracted honey: Market is well stocked with California, which is coming along in large quantities. The demand is fair, mostly in small-sized lots. Prices remain about the same, 5½@6½c per pound, according to quality and quantity. Southern in barrels at 52@57c per gallon. New crop West Indian is now beginning to arrive and is selling at from 60@63c per gallon. Beeswax firm at 28@30c per gallon.
Hildreth & Segelken

Philadelphia, Nov. 20.—The demand has been very good for honey in the past 10 days. In fact, it takes a little sharp, cool weather to get people started, and when they do start, the demand continues for some months. We would say, now is the height of the honey season. We quote, in a jobbing way: Fancy comb, 15@17c; No. 1, 13@15c; amber, 12@13c. Extracted, fancy white, 7@8c; amber, 6½c. Beeswax firm at 28c.

We are producers of honey and do not handle on commission.
Wm. A. Selser.

Albany, N.Y., Nov. 8.—Our honey market is in healthy condition; demand good; receipts about equal to demand. Prices are not quite as high as last year, but the tendency has been to work off the honey before cold weather, and we think the crop has come forward more than usual this season, which is a good sign. We quote: Fancy white clover, 15c; A No. 1, 14c; No. 1, 13c; buckwheat, fancy, 13c; A No. 1, 12c; No, 1, 11@12c; straight buckwneat is wanted in this market. Extracted, quiet: white, 7½c; mixed, 6½c; buckwheat, 6½c. Beeswax scarce at 30c.
H. R. Wright.

Indianapolis, Nov. 7.—There is a tendency for higher prices on best grades of honey. The demand for strictly fancy white comb honey exceeds the supply. Demand for lower grades of comb honey not good. Numerous shipments of honey arriving, but no one producer seems to have very great quantities to offer. I quote fancy white at 15@16c; No. 1 in poor demand at 12c, and amber dull at 10c. Best grade extracted brings 8@9c in 60-lb. cans; amber slow at 5c. Beeswax, 28@30c.
Walter S. Pouder.

Denver, Nov. 11.—No. 1 white comb honey, per case of 24 sections, $3.35; No. 1 light amber, $3.00; No. 2, $2 50@3.00. Extracted honey, 6¾@7 cts. per pound. Supply is light and we could make quick sales of consignments at above figures. We pay 24c for clean, yellow beeswax delivered here.
The Colo. Honey-Producers' Assn.

Cincinnati, Nov. 17. — The nice weather holds back the demand for comb honey. Crops seem to be exceedingly short and producers in the West keep the prices high. We quote as follows: Fancy water-white and No. 1 white clover, 14@16c; No. 2, 12@14c. Extracted seems to be more plentiful, and we quote same in barrels, light amber, 5¼@5½c; in cans, ½c more; white clover, 7@8c. Beeswax, 28@30c.
C. H. W. Weber.

San Francisco, Nov. 15.—White comb, 1-lb, sections, 8@9 cents; amber, 6@7c. Extracted, water-white, 4¾@5c; white, 4½@4¾c; light amber, 3¾@4 cents; amber, 3@3½c; dark amber, 2½@3c. Beeswax, good to choice, light, 26@27c.

The situation remains about as reported before, with very little disposition on the part of dealers to stock up at the present prices. The regular handlers of honey are now busy with other lines and for that reason honey is being neglected. The present asking price is not attractive enough to induce buying from a speculative point of view.

FANCY WHITE EXTRACTED HONEY
CRATES 2-60 LB. CANS; 8c
TWO OR MORE CRATES; 7½
LARGER LOTS; WRITE FOR SPECIAL PRICES. ALL F. O. B. CINCINNATI. CASH WITH ORDER. SAMPLES 10c TO PAY POSTAGE.
THE FRED W. MUTH CO.
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SEND FOR CATALOG OF BEE SUPPLIES WITH SPECIAL DISCOUNT.

FOR SALE
Extracted Honey—Fancy white, 7c; fancy amber, 6½c; ¼c less in 5-case lots or more.
C. C. CLEMONS & CO.
45Atf KANSAS CITY, MO.

HONEY AND BEESWAX
When consigning, buying or selling, consult
R. A. BURNETT & CO.,
199 SOUTH WATER ST. CHICAGO, ILL.

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"ARND" You Going to the National Bee-Keepers' Convention at Chicago Dec. 19, 20, 21 ?

Our Chicago Representative, Mr. H. M. ARND,
will make you at home

AT OUR CHICAGO AGENCY,
YORK HONEY & BEE-SUPPLY CO.,

141 and 143 Ontario Street,
H. M. ARND, Mgr.,

Where you will be cordially welcomed, and where all information can be obtained regarding Convention and city. Respectfully,

G. B. LEWIS CO.

"It Pays" to be the "Early Bird"

7 PERCENT

FOR

CASH ORDERS IN DECEMBER.

Send in your order for Bee-Supplies now. Time is flying and early-order discounts are fast diminishing. By placing your order with us at this time you are not only realizing good interest on the money invested, but you will have your goods on hand all ready for use when needed. Now is the time to nail up your hives, put together sections, and get other goods in readiness for spring.

The following early-order discounts are allowed on all orders for Bee-Supplies accompanied by the cash.

7 percent during December
6 " " January
4 percent during February
2 " " March

G. B. LEWIS CO. Manufacturers of Bee-Keepers' Supplies **Watertown, Wis.** U. S. A.

National Bee-Keepers' Convention at Chicago, Dec. 19-21

AMERICAN BEE JOURNAL

45th Year | CHICAGO, ILL., DECEMBER 7, 1905 | No. 49

AGRICULTURAL COLLEGE

Mr. Chas. Clarke and Apiary, Located in Cook Co., Ill., (Mr. Clarke's Father and Mother Standing Near the House.)
(See page 839)

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY
GEORGE W. YORK & COMPANY
334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec05" on your label shows that it is paid to the end of December.

SUBSCRIPTION RECEIPTS.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows that the money has been received and credited.

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National Bee-Keepers' Association

Objects of the Association

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00

General Manager and Treasurer—
N. E. FRANCE, Platteville, Wis.

☞ If more convenient, Dues may be sent to the publishers of the American Bee Journal.

The Honey-Producers' League

(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

MEMBERSHIP DUES

1. Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.
2. Any honey-dealer, bee-supply dealer, bee-supply manufacturer, bee-paper publisher, or any other firm or individual, may become a member on the annual payment of a fee of $10, increased by one-fifth of one (1) percent of his or its capital used in the allied interests of bee-keeping.

GEORGE W. YORK, Manager,
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Now is the Time to Order

Your Bee-Hives, Sections, Shipping-Cases, Berry Boxes, and Crates for the coming season. By sending us a list of goods wanted, we can save you money.

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35A18t SHEBOYGAN, WIS.

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Made of artificial stone. Practically indestructible, and giving entirely satisfactory results. Comb foundation made easily and quickly at less than half the cost of buying from the dealers. Price of Press, $1.50—cash with order. Address,

ADRIAN GETAZ,
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☞ J. G. Goodner, of this State, writes me that he "prefers to pay $25 for a Rietsche Press than do without it."—A. G.

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Low Freight Rates. .·. .·. .·. Catalog Free.

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For cash orders before Dec. 1..8 percent | For cash orders before Feb. 1..6 percent
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Bee-Supplies bought NOW are subject to a generous discount from our regular low prices. We do this to keep our factory busy. Send us a list of what you need and we will make you a price by return mail that will convince you.

If you want a catalog that is more than a price-list—that contains valuable information on bee-keeping—you must hurry to have your name placed on our mailing-list. Only a limited number will be printed. It's free, of course.

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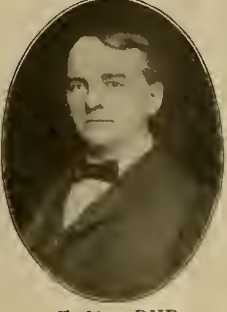

H. M. ARND,
Mgr.

When attending the National Bee-Keepers' Convention at Chicago, Dec. 19, 20, 21

COME AND INSPECT

LEWIS' BEE-WARE

AND MAKE YOUR HEADQUARTERS AT

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We are also Western Agents for

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Incubators, Brooders, and Poultry Supplies.

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IN LOTS OF

Name of Grade	1-lb.	5-lbs.	10-lbs.	25-lbs.	50 lbs.
Medium Brood	.55	.53	.51	.49	.48
Light Brood	.57	.55	.53	.51	.50
Thin Surplus	.62	.60	.58	.56	.55
Extra Thin Surplus	.65	.63	.61	.59	.58

DISCOUNTS for Early Cash Orders

During	September	10 percent
"	October	9 "
"	November	8 "
"	December	7 "
"	January	6 "
"	February	4 "
"	March	2 "

Beeswax Wanted at all Times.

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Everything the bee-keeper needs. Distributing house for Lewis' Goods at Factory Prices. Now is the time to buy for next season.

Cash Orders for regular Supplies before January, 7 percent Discount.

FINE EXTRACTED HONEY in cans or barrels. The best the world can produce Samples 8 cents, to pay postage and packing. How much can you use? Prices quoted quick on the quantity you mention.

We buy BEESWAX at all times in the year. Send for our Catalog and "Special"—free.

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KRETCHMER MFG. CO., Council Bluffs, Iowa.

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That covers the whole Apicultural Field more completely than any other published, send $1.20 to

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FOR HIS

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Bee-Keepers' Early Discounts

Now is the Time to send in your order for goods for use next season, and for all orders where cash accompanies we allow the following discounts:

Before October 1	deduct	10 percent
" November 1	"	9 "
" December 1	"	8 "
" January 1	"	7 "
" February 1	"	6 "
" March 1	"	4 "
" April 1	"	2 "

Freight-Rates from Toledo are the lowest Can take Honey and Beeswax in exchange for Supplies if you desire. Send for free illustrated Catalog. It describes and illustrates everything for both the Poultry and Bee Keepers.

GRIGGS BROS.

521 Monroe Street,

TOLEDO, - OHIO.

Mention Bee Journal when writing.

For 1906

Gleanings in Bee Culture for 1906

We are bending every effort to make Gleanings the best bee-paper ever issued. 1906 will be the banner year in our history. Beginning with the Christmas number a great change will take place. Frequent new cover designs. New department headings. Better paper. Better printing. More pages. Our excellent staff of contributors will be maintained, and many splendid special articles will be published.

Half-Tone Illustrations

During the past summer we have had a special artist to take photographs for us. He has traveled on our account alone the past summer over 4000 miles, and we can promise some very fine pictures. Many of the Second Prize Photo Contest, American and Foreign, will appear soon. Our engravings are made by the very finest engravers in the United States. Just this wealth of illustration doubles the value of the paper.

Advertisements

Gleanings prides itself on the clean class of advertisements it carries. Its subscribers show their appreciation of the fact by their liberally patronizing them. There is no better medium in the United States for those catering to the needs of the bee-keeper. We now print 25,000 copies and yet with our special edition (Dec. 15, 40,000) our old rates hold good which were based on 20,000 circulation. Gleanings gives its subscribeas and advertisers full measure, pressed down and running over.

Subscription Rates

With all those improvements the price will be the same—$1 00 per year. We make a special rate of 6 months trial for 25 cents to those who have never taken Gleanings. You will find Gleanings listed in all principal club offers. We make many special inducements. In fact, we are just waiting for YOU to do your part.

Our Bees and Queens

We are running at Medina and vicinity 5 queen-rearing yards, at other points 3 more. We are prepared to furnish our celebrated Red Clover stock, a stock that won a splendid reputation for gathering honey from any source. We are also prepared to furnish bees in nuclei and full colonies.

CHRISTMAS 1905
GLEANINGS IN BEE CULTURE
THE A. I. ROOT CO.
MEDINA, OHIO, U. S. A.

Root's Goods for 1906

Our Supplies for this year are of the same quality and standard of workmanship that has characterized our lines of previous years. Our motto is: "Not how much, but how good."

In the matter of improvements it is generally conceded that we are the leaders. We are constantly testing out every new device in our own yards and when it has stood the test we place it before the public.

Our Hives and Sections

Our hives and equipment, both for workmanship and clearness of stock, cannot be excelled and we doubt if they have ever been equaled. So strong is the demand for these goods that there has been a strife in many cases among dealers to get the Root Company's lines because they knew that everything that bears the Root brand is always popular with the customer and always the best that money and brains can produce.

Our sections and frames for 1906 are even better than ever. They are inspected and reinspected and each inspector is required to put in each box of sections that he passes upon his own inspector's card so that if complaint is made this card will come back on him. As he is anxious to hold his position and if possible get an increase in pay, it is clearly to his interest as well as that of the customer to let nothing but perfect goods pass.

The Root Automatic Extractors

Our extractors for 1906 in point of improvements and quality of workmanship leaves everything else in the shade. The 4, 6 and 8 frame machines have the finest automatic reversing mechanism that has ever been put into a machine. Even the two-frame models can have the reversing mechanism put on at a slight additional cost; but we do not ordinarily advise buying the two-frame automatic. Steel construction has been substituted for cast-iron wherever practicable.

Our Catalog for 1906

It will be a great improvement. A pleasing new cover design. Entirely revised and rewritten. Many new illustrations. The new arrangement of matter will be especially welcome by many. Everything is classified. All Bodies, Supers, etc., together. The prices are **under** each article described and illustrated, thus doing away with price-tables. Beginning Dec. 15 our catalog goes on the press for the first run of a solid 3 weeks, day and night. If you want a copy of this first edition let us have your name at once.

THE A. I. ROOT COMPANY

Medina, Ohio

⁂

144 Erie St., Chicago 10 Vine St., Philadelphia 44 Vesey St., New York

Established in 1861

Oldest Bee-Paper in America

THE AMERICAN BEE JOURNAL

(Entered at the Post-Office at Chicago as Second-Class Mail-Matter)

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor CHICAGO, ILL., DECEMBER 7, 1905 Vol. XLV—No. 49

Editorial Notes and Comments

Mice in Bee-Hives in Winter

A mouse will do a lot of mischief in a hive in winter. Not so much the amount of honey eaten, but the tearing down of beautiful worker-combs. Neither would the holes made in the combs count for so much if the bees would fill them up again with worker-comb; but they're just about sure to fill them up with drone-comb. To be sure, the bee-keeper can put in patches of worker-comb, either before or after the bees have filled the holes with drone-comb, but it is a troublesome thing, and so many other things are to be done that it is likely to be neglected, and many a pound less of honey is secured in the harvest because of the honey used in rearing useless drones, and the honey they consume after they are reared.

Plenty of cats will help, and in the cellar traps and poison may be used. In any case, whether in cellar or out-doors, one thing may be done that acts by way of prevention, and indirectly by way of cure. It is to have the hive-entrances mouse-tight. Close them with wire-cloth three meshes to the inch, and they are just as open as ever for the bees, but closed to the mice. Of course you may fasten a mouse in a hive by doing so; but that is better than letting him have the free run of the hive. Most of the time the bees are so nearly dormant that a mouse is monarch of all he surveys; then comes a time of stirring up, and Mr. Mouse runs out of the hive to get out of the way, only to return or enter some other hive when matters settle down. But if the entrance is closed he can not get out of the way, and the bees make it so hot for him that in spring you will find a dead mouse in the hive.

Missouri Bee-Keepers Waking Up

We have received from Robt. A. Holekamp, Secretary of the Missouri State Bee-Keepers' Association, 4263 Virginia Ave., St. Louis, Mo., some printed matter which has been prepared by him and issued by the Missouri State Board of Agriculture especially for circulation among the bee-keepers of Missouri. It is Mr. Holekamp's aim to keep up this kind of propaganda among the bee-keepers in the hope that it may induce many who are now using box-hives to become modern, progressive bee-keepers.

The 16-page bulletin contains much valuable information for the bee-keepers of Missouri. Much space is devoted to the treatment of foul brood. The bulletin is illustrated, and should create much interest in bee-keeping in that great and growing State. A copy can be had by applying to Geo. B. Ellis, Secretary of the Missouri State Board of Agriculture, Columbia, Mo.

It is the intention of the Missouri State Bee-Keepers' Association to present a Bill before the next Legislature, providing for inspectors of apiaries; also a Bill providing a heavier penalty for the sale of any article under the name of honey which is not the unadulterated product of the honey-bee.

Every member of the State Association is asked to consider himself a committee of one to form a bee-keepers' club in his county. There is such a club in St. Louis, which has 27 members. Of course, every club member is also a member of the State Bee-Keepers' Association. Monthly club meetings are held. It is expected that not only will the production of honey be stimulated by such clubs, but that the consumption of honey will also be increased.

A larger income is needed by the Association to carry on the work already planned. Taking it all together, the Missouri bee-keepers seem to have made a good start along the line of improving their organization. Much of this is doubtless due to the activity of Mr. Holekamp, who seems to be a tireless worker for the greater progress and prosperity of all the bee-keepers of Missouri.

"Disagreeable Peculiarities" of "Best" Bees

The subject of black bees vs. Italians seems to be up for discussion again, and as on most subjects each side has its advocates. One of our anti-black readers sends this comment on a remark made by "Afterthinker" Hasty:

MR. EDITOR:—On page 795, I find the following written by the man who thinks after:

"One may refuse to keep certain bees because of disagreeable peculiarities, and at the same time claim that they are really the best bees."

I wonder if Mr. Hasty would have written that if he had done his thinking before writing in place of after. There may, however, be another way of accounting for it. Our "Afterthinker" lives in Ohio, and somewhere in the neighborhood of the time in which that was written there was a very exciting election, and the friends of one Herrick were offering drinks at marked-down prices. Can it be that our usually wary "Afterthinker," temporarily persuaded by bargains in tanglefoot, should have imbibed so much that his beclouded brain could not discern that "peculiarities," whether "disagreeable" or otherwise, are among the things that can not be counted out in taking an inventory of the qualities that go to make up the character of a bee? If I understand him correctly, he says:

> "Blacks are the best bees, but I refuse to keep them because of a disagreeable peculiarity in their style of running when handled." To which I reply, "Yes, blacks are really the best bees, but they have the disagreeable peculiarity that they don't put up as good a fight against robbers and moths as do Italians and hybrids; also that they don't store as much honey as others, and a few other little peculiarities which make me refuse to keep them, although they are really the best bees." ANTI-BLACK.

Width of Sections in England

In this country 1⅞ inches prevails, in England probably 2 inches. At a meeting of the British Bee-Keepers' Association, reported in the British Bee Journal, the question of adopting a standard width came up. After an animated discussion, the resolution in the following form, "That it is desirable, in the opinion of this meeting, that there should be a standard section recognized by the British Bee-Keepers' Association, namely, 4¼x4¼x2 inches," was submitted to the meeting, and carried by a majority of seven.

Fastening Foundation in Frames

In this country saw-kerfs to receive foundation in top-bars are generally made only in top-bars ½ an inch thick or thicker, the kerf being only ¼ inch deep, and not materially affecting the strength of the top-bar. In England top-bars ⅜ thick are sawed entirely in two, and complaint is made that the top-bar is thus weakened to the extent of 10 percent. But this gives opportunity for a special plan of fastening thus given in the British Bee Journal:

> "My own simple plan is to press the top edge of the sheet between my thumb and forefinger; when thus flattened the foundation slips easily into the saw-cut, and is pushed so far through as to project slightly on the upper side of the top-bar, then run a hot poker along the projecting edge, and the sheet of wax is made perfectly secure."

Miscellaneous News ✣ Items

Canadian Beedom is a new department of the American Bee Journal this week—or, rather, an old department revived—with Mr. Morley Pettit as conductor, or editor. Mr. Pettit is well known to bee-keepers of Canada, although one of the younger generation of bee-folks. His crop, the past season, was 40,000 pounds of extracted honey. Having produced that amount in one season in Canada should give him the right to speak on bee-culture with at least some authority.

We trust that our Canadian readers will help Mr. Pettit to make their department as interesting and valuable as possible.

A 20-Page Number is this week's American Bee Journal. It is our expectation to make it a 20-page paper from now until July 1, 1906, and then 16 pages until Dec. 1. This plan is begun on account of the extra advertising patronage and also extra demand for general reading space during the first six months of the year. Also, from July 1 to Dec. 1 most bee-keepers are very busy with work aside from bee-keeping, so that they have scarcely time to read so much bee-literature.

By the way, the extra pages each week are furnished at no extra charge to the subscribers. We are pretty familiar with the current bee-literature of the day, and, really, we think it would be rather difficult to find a bigger and better dollar's worth of apiarian information than we give in 52 copies of the Weekly American Bee Journal each year.

The Apiary of Chas. Clarke, of Chicago, Ill., appears on the first page this week. The year after the Chicago fire the Clarkes located and built at Washington Heights

Some 3000 or 4000 pounds of Mr. Clarke's 1905 Honey Crop, as it appeared in his Honey-House.

The sons have grown up on the old homestead, one a school teacher, one a member of the Board of Trade, and the third the cashier for a large candy company and also a bee-keeper known to many in Chicago. The parents have had a wedded life of 53 years. Mr. Clarke, Sr., has been honored by reappointment as judge in Chicago four successive terms of four years each, and never had a case reversed by the higher courts. He was a professor of geology in the old Chicago University, and an active member of various literary and scientific societies.

Mr. Chas. Clarke has a great many visitors from the kindergarten schools, and his bees have always been on their good behavior when the children are around, and have never stung any of them.

Mr. Clarke is a firm believer in racking up honey in a hot room, for 30 to 40 days, when having any sweet clover in it, as his honey-room will show by the picture herewith.

He is a crank on foul brood, and willing to prove at any time the responsibility of the queen for same. He commenced with 2 colonies in 1895, and his bees had the first dose of foul brood that summer. The third year saw him with 8 colonies, and 7 out of 8 took the disease, which taught him a valuable lesson.

Mr. Clarke generally doubles up his apiary to 50 or 60 colonies in fall.

He is engaged all day at the office, but always finds time to have a good flower-garden, and values highly the reputation of having well-behaved bees by neighbors 50 feet away, never having had a complaint.

Mr. C. imports his own breeding queens, and tries at all times to have quiet stock and good honey-cappers, as he runs for comb honey only, and always marks a hive where the capping is poor, so that he can change the queen, as poor capping for him makes 3 cents a pound difference on the honey. He has seen some poor crops, and has fed up to July 1, and also has had good crops, averaging one year 182 pounds per colony, spring count, and allowed only a very small increase.

Mr. Clarke's family came from a long line of ancestry. The loom for weaving silks is named from his mother's family. It was invented by Sir John Loomes. Mrs. Clarke has in her possession specimens of brocaded silk 200 years old, of great value. The first steam plow was invented by his mother's brother. Mr. Clarke, Sr., came from old intellectual stock, his uncle, Archdeacon Clarke being, as a young man, tutor to the King of Hayti, and latterly Archdeacon of Antiqua, of the West Indies.

Mr. Chas. Clarke, the bee-keeper, has never married, but lives with his aged and honored parents at the lovely old home shown in the first-page picture.

"Eggstra"-Good Eggs are what we received recently—several dozen of them—from Mrs. Dr. C. C. Miller, of Marengo, Ill. When we arrived home one evening we found that quite a large box had come to our house by express. Mrs. York had taken it in, and insisted that we open it before supper, to see what it contained. (A woman's curiosity is simply wonderful, isn't it?) We did so, and there were over 5 dozen of just the finest, largest, brownest hens'-eggs you ever saw. It seemed like Easter-time when we lived on the farm and used to hide eggs in the granary or barn, and then bring them in on Easter morning. But those Marengo eggs are fine, and greatly appreciated by "ye editor" and his good "frau." Thank you, Mrs. Miller.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Canadian Beedom

Conducted by Morley Pettit, Villa Nova, Ont.

A Department for Canadians

It is with pleasure that I am undertaking, at the request of "Ye Editor-in-Chief," to say something weekly to Canadian bee-keepers about themselves, and to others about Canadian bee-keeping. We have not the sunny climate of the South in our beloved country—"Our Lady of the Snows"—but we have the sunshine just the same, and we have, what is more than that, the clear, bracing winter air which clears the brain and sets the blood coursing through the veins in a most exhilarating manner. Further than that, it frees the land for a time of insect pests which thrive in the South during 12 months in the year.

MORLEY PETTIT

Foul Brood Inspection

Ontario bee-keepers are said to have the best foul brood law in existence; but we are not satisfied, as the Hon. Nelson Monteith, Minister of Agriculture, said in addressing the convention, if we considered we had attained an ideal we should make no further progress. To attain the highest good one must not be satisfied, nor dissatisfied, but *unsatisfied*. Ontario bee-keepers are thus with regard to the Foul Brood Act. We feel fairly sure that we have the most skillful inspector that can be found, but the work is too great for him. Accordingly, a resolution was put through the convention, asking the Minister of Agriculture to pass, at the coming session of the Ontario Legislature, amendments to the Foul Brood Act, whereby the Province shall be divided into three districts, with three inspectors, one to reside in each district. This is to come in force at the next annual convention, and in the meantime the old inspector holds office.

Canadian Bee-Keepers in Jamaica

Speaking of the South, suggests Jamaica—that bee-keepers' paradise" to which several of our prominent bee-keepers were looking for an escape from the long period in which Canadians are deprived of the pleasure of seeing bees fly and gather nectar. Great stories had become current of

300 pound averages, delightful climate, and the like, until Arthur Laing of Hamilton, R. H. Smith of St. Thomas, and Jacob Alpaugh of Galt, could resist no longer, but made the venture of the trip last winter. The rest of us—more cautious—are now reaping the benefit of their experience. At the Ontario bee-keepers' convention in Toronto, Nov. 15 to 17, Mr. Laing gave his experience.

The advantages of Jamaica bee-keeping, as set forth by Mr. Laing, are principally cheap labor—wages being about 25 cents per day, without board. On the other hand are expensive and inadequate transportation, starvation period during several months in which bees steadily dwindle and fall a prey to the ravages of moths and ants; honey prices about 2½ cents per pound, and an average yield of 25 pounds per colony.

Mr. Laing also mentioned confidentially, fleas, and, if my memory serves me rightly, land crabs, ticks, scorpions, lizards, and other household pets too numerous to mention. In fact, all considered, it was quite evident Mr. Laing came away with a bad impression of Jamaica for bee-keeping.

Ventilating Hives

It is pretty well established that large hive-entrances are the thing in the honey season; but not so many will admit, or have ever thought of the advantage of super ventilation. I can not remember when my father, S. T. Pettit, did not put 3 or 4 strips ⅜-inch square and about 4 inches long lengthwise on the back end of 3 or 4 top-bars in the extracting super. They projected ½ inch, and held up the back edge of the quilt and cushion to admit air to the super in hot weather. That was one of the things I could not get around at first when changing from cushion and gable cover to the flat cover packed with felt paper, which is so much more convenient in migratory bee-keeping.

R. F. Holtermann suggested to me a saw-cut about ⅜-inch wide and 3 or 4 inches long in the back of the super a couple of inches down from the top. It is fitted with a galvanized-iron slide for closing in cool weather, and for moving. The bees never use it for an entrance except when the queen gets into the super, and it is certainly a great help in controlling swarming.

Report of the Middlesex Convention

The annual meeting of the Middlesex Bee-Keepers' Association was held in London, Nov. 4. Those present reported a very good season, an average of about 75 pounds per colony, spring count, mostly extracted honey. One member reported 228 pounds of extracted honey from one colony, and 196 sections from a single colony, and neither of these offered to swarm.

Mr. R. H. Smith read an instructive paper on, "Shall We Keep More Bees or Manage those We Have to Better Advantage?" He advocated the latter plan of caring for those we have rather than increasing the number of colonies and decreasing the amount of surplus honey per colony.

Mr. Miller read an interesting paper on "Managing Out-Apiaries Without Help." By the use of hives and implements adapted to his system, he is able to visit each yard every 4 days; the honey can be extracted or taken home to be extracted. He uses the Heddon hive; the colony is examined for queen-cells between the two sections of the hive, the top portion being raised or tipped back by an implement of his own design. If there are signs of swarming the colony is divided.

The subject of producing comb or extracted honey was taken by Mr. Anguish. What he thought to be of more importance was to have strong colonies, then you can produce either, but he did not like to put on sections towards the close of the honey-flow; he would put on an extracting super. Another important point brought out was, that strong colonies ripen their honey better than the weak ones.

An address on foul brood was given by Mr. Gemmill, Assistant Foul Brood Inspector of Ontario. He considered our foul-brood laws very good, as some of the States had copied from them. The disease is on the decrease. He considered it more dangerous with young bee-keepers, who were more likely to have robbing, and spread the disease. A suspected case should be destroyed, or treated in a careful manner by shaking on starters, then in 3 or 4 days shake again on full sheets of comb foundation. Caging the queen will prevent them from swarming out.

Reforesting was discussed, led by Mr. Robb, who thought that bee-keepers should plant basswoods and honey-locusts.

The sowing of buckwheat for honey alone was not thought advisable, as it requires a warm, light soil and a moist atmosphere, to secrete nectar.

The following are the officers for the ensuing year: President, Morley Pettit; Vice-President, F. J. Miller; and Secretary, E. L. Bainard, of Lambeth.

E. L. BAINARD, *Sec.*

Contributed Special Articles

Some Mistakes of Bee-Keepers—Pests of the Apiary

BY C. W. DAYTON

I NOTICE the mention of "Prevention of Swarming by Inversion," on page 517. This was one of the operations performed with the "Queen-Restrictor," which I described in Gleanings in 1889 or 1890. When we first begin to experiment with a contrivance we watch it daily, or even hourly, sometimes. But when we get a large number of the new contrivances in use the colonies increase, and corresponding profits invested in more "irons in the fire," our experiments are liable to be conducted by the "lick and promise" fashion.

I believe the "Inversion" system failed because it was too much labor. During the several years since that time I have looked upon the "Queen-Restrictor" as a waste of thought. But last year when the colonies bred up so strong that they clustered all over the fronts of the hives when there was no prospect of there being a pound of honey for them to gather, I wished then that I had a "Restrictor" for every queen.

OUTDOOR FEEDING OF BEES.

On page 553, Mr. Hasty suggests in regard to my outdoor feeding, that I could have exchanged a few full combs from the strong colonies into the weak. So I could have done, but I was very busy at other kinds of work, and supposed if the feed was supplied all the time the strong would get stronger, and the weak would get enough to live and build up somewhat. It seemed that about 50 would not even carry it home. I thought that I could spare no time so much as to raise the covers, and did not go amongst the hives more than once in 10 days. I did not know there were more than a dozen dead until I needed the hives to put swarms in, and that was often not until the swarm was already on a bush. Though there was lack of attention there was no lack of feed put out, and I had 7 or 8 tons of honey to draw on, and it was not used grudgingly.

As it turned out, there were 30 to 40 swarms about two weeks earlier than in other apiaries, and kept nearly one extracting ahead of other apiaries.

Now, attention is usually the cheapest article in the whole apiary management. I have a very large stock of attention, but there was not enough of it where it ought to have been. I think Hasty, Doolittle or Miller ought to have warned me beforehand. As it is, I can not use their advice until it happens again.

We see bees so anxious to rob at sometimes of the year that we take it for granted that they will rob at all times. I had been reading of "short cuts." The "cut" I chose was very "short." One day last January, with the thermometer at 76 degrees in the shade, I went to one of my apiaries of between 60 and 70 colonies, and at about 7 o'clock in the morning put out several feeders of half honey and half water boiled together. I put this feed right in amongst the hives. Then I went into the shop to await developments. I expected to hear the sound of robbery in a few minutes.

Eight o'clock came, and 9, and at 10 o'clock I went to see what was doing. Only 5 or 6 bees around the feed! Said I to myself, "Is it possible that this whole apiary has 'gone up?'" I kicked a hive; a roar of bees came. I kicked another; a roar. Another; a roar. And so on along the line.

"Well," says I, "this shows that bees do not know things all of a sudden and without previous experience." It took me 4 days to teach those bees to rob and take the amount of feed I expected to give them in 6 hours.

If I had put out feed in that manner in August or September, it would cause such a furor as to cover the hives black with mad bees, which would attack people in the streets and nearest houses within an hour. Since there were 160 colonies in good order when the present honey harvest began, we were somewhat satisfied, having set the mark several years ago not to keep above 120 colonies.

SKUNKS IN THE APIARY.

But there may be other mistakes made besides those along the line of feeding. In September, two years ago, it was found that skunks were working about some of the colonies. By the use of poison and traps there were 8 destroyed during the fall. This seemed to clear them out so that there were no more about our apiary during the next season also.

A near-by apiarist having 225 colonies, when I asked him if his bees were bothered by skunks, said he did not care if they were; it would clear out some of the bees and save feed. He lived about 50 miles away, and left the bees in charge of a neighbor, but with no instructions as to skunks. It could be readily seen that there were plenty of skunks about.

As nearly as I have been able to determine, a skunk will work at a colony for 2 or 3 weeks until the colony becomes weak, then go to another hive, and so on for some 6 months or more. In this way a skunk will depopulate 6 to 8 hives during one season. It leaves the colonies too poor in bees to last very long.

Eight skunks would get away with 64 colonies. If undisturbed they will breed the next spring, and in the following fall return with the increase. This was what this apiary went through, between the good season of 1903 and the spring of 1905, when there were 89 colonies left. When the owner was asked how he lost so many, he said by robbing. This bee-keeper fed sugar. I fed honey. He contracted the hive-entrances to ½ inch. I contracted none at all, and saw no robbing. His loss, figured from our yield, would amount to 10 tons of honey; that is, 135 colonies at 150 pounds per colony. At 5 cents a pound it would amount to $1000. Just what part is chargeable to skunks is a question. A half pound of beef and a little strychnine would have "settled their hash" in short order.

When skunks cost a bee-keeper $100 a head, it ought to attract his attention a little. He might stoop to take a few, if for no more than the hide and tallow. It might add variety to life, and set his blood to circulating during an off year.

One day last June a bee-keeper came to my apiary about 7 o'clock in the morning to borrow a smoker. He had set his smoker on a bee-hive while he went into the house to extract. A spark fell out and set the hive on fire and then burned the smoker. He intended to start for the city the same evening, but had 500 pounds of honey to take off his hives to complete his load and give the bees storage-room during his absence. In some apiaries one can extract without smoke, but this apiary is the other kind.

At sunset the smoker I was using tipped over, setting itself on fire, burning the bellows all off. By dark I had a new bellows completed. The next morning I attached it to the barrel in 5 minutes.

Only for a few tanned skunk hides lying around I should have been obliged to make a trip of 30 miles, or wait for the mail to bring a smoker from the city. So I have come to regard the skunk not as a detestable animal, but simply a walking smoker-bellows!

After cutting out the two pieces to form the bellows, the odds and ends are used for hinges and latches to the baby-nucleus hives; a latch for the honey-house door; a strap for the hive-opener; a small part on the back of the neck is of the right thickness for the leather part of the screw-cap honey-gates. But the best of all is a patch of leather on each knee, padded underneath so as to drop upon the knees when examining colonies. This is about as good as a seat, and more handy. The blacksmith wears an apron. An apiarist might wear a part of one. It is very restful to change from the long-continued walking and stooping position. I have sometimes thought that I could do one-fourth more work by these change-about positions, especially in examining brood-chambers and in queen-rearing.

Then the oil of the skunk is useful. It will keep the hinge-end of a jack-knife blade from wearing off round so it will shut up in an unexpected moment and cut a gash in the apiarist's finger. It is good on the cogwheels of the foundation mill. A clock may run too fast in summer and too slow in winter, and the bee-keeper is continually trying to regulate it. At last he becomes disgusted and throws a good clock away as worthless. Or he takes it to some tinkerer, who, if he were a bee-keeper, would extract his honey before it is sealed. The clock runs about as long as unripe honey will keep, and then gets back at its same old tricks. Look at the clock, and then at the sun, to tell the time of day. Poor or adulterated oil will harden and retard the speed of a clock in cool weather, and do the opposite in warm weather.

The gun should be kept as bright as a new silver dollar throughout the inside of the barrel. It takes oil. We can not buy oil and be sure of what we are getting every time. While some oil will appear to be all right, it has often been mixed with an adulterant that spreads a tarnish in the gun that shot and powder can not remove. When we aim at a bee-bird that is perched above our hive of best drones, we want the bird to fall instead of flying away unharmed. Bee-birds (not king-birds) will lurk for hours around a baby nucleus in which we may have a dozen hand-picked drones.

OTHER PESTS OF THE APIARY.

There are pests as well as climate in Southern California, and rats and gophers are no trivial affairs. If we keep a tank of honey 3 feet from a tree, rats will climb the tree and make a flying jump into it. If we spread a cloth over a tank so that the corners hang down, rats are sure to climb up on the under side and get into the tank. I have known them to carry away a bushel of side-bars to make a nest, and cut large holes through the sides of hives. They delight in carrying away files, bits, nails, hinges, nail-sets, screw-drivers, etc.

When I bought an acre of land in southeast Los Angeles, I set a row of eucalyptus around the outside, then 12 feet inside another row of cypress, inside of which to place my 120 colonies of bees. There were about 300 trees in all. By fall they had all been destroyed by gophers except a dozen or so.

Before I purchased the land it was planted with pumpkins. A man came along one day and called out (I think he was lately from the East): "What will you take for that patch of pumpkins?" "How much will you give?" "Five dollars," he answered.

When he came to gather them he found them to be merely skins filled with dirt, the seeds and meat having been removed by gophers. I bought lumber and kept a tight fence around the bees until I could learn to protect trees from gophers. I have known a gopher to gnaw a hole through the bottom-board of a hive and completely fill the hive and super with earth.

The aspects of neighbors toward gophers is about the same as the above-described bee-keeper toward skunks. I might continue describing their peculiar antics until it would fill several bee-papers. The main thing to impress upon the reader is that when we see a pile of fresh earth and a gopher's head sticking up beside it, out in the middle of the neatly-dressed lawn or bee-yard, to make it the last time he ever pokes his head out anywhere.

Due respect for the business demands that we learn to steer clear of all difficulties, or, in fact, change many difficulties into advantages. Watch for my article on trap-setting.

Chatsworth, Calif.

Comb Foundation and Its Uses

BY ADRIAN GETAZ

At this day the advantages of using foundation liberally are so well known that it is hardly necessary to mention them. In the brood-chamber the advantages of securing straight combs of all-worker. Furthermore, the increased rapidity of brood-rearing (that is, in case of a swarm hived without already built combs). If no foundation is given, or only small starters, the queen is obliged to wait until the combs are built before she can lay any eggs. When full sheets of foundation are given, a day or so is enough to draw out as much foundation as she can fill with eggs. So there is no delay.

In the sections it is still more important to give full sheets. Only a few bees can work at a time on a small starter, so the building up of full combs is delayed. On a full sheet a large number of bees can work at once, draw out the foundation and add to it enough to begin putting honey in it before hardly anything could be done on a small starter. I want to call the attention of the reader to this point, because it has not been sufficiently emphasized yet.

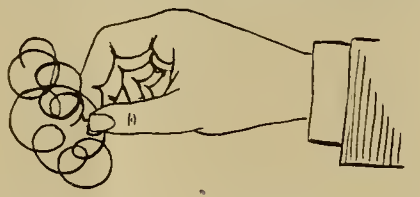
WIRING FRAMES.

The frames should be wired. The two faces of a sheet of foundation are seldom worked equally on both sides. The side toward the center of the cluster is usually in advance of the other. The result is that the sheet curves outside because the weight of comb honey and brood on the inner side is greater. Nothing but complete wiring prevents this.

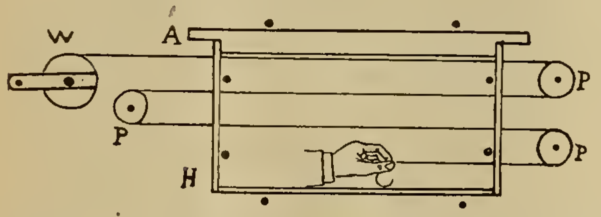
Wiring vertically would be a little the best, but it would require a larger number of holes, and therefore more time to make them and pass the wire through. Furthermore, boring holes through a thick top bar would be quite a job. A shoemaker's awl is sufficient to make the necessary holes in a thin end-bar.

It is not necessary to fasten the foundation to the top-bar—it is sufficient to have the top-wire near to it, not more than a quarter of an inch from it.

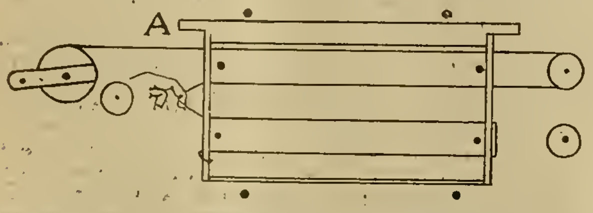
The wiring is done with thin tinned wire—I think No. 30 is the one advised and sold for the purpose by the supply dealers. In the factories the wire is wrapped around a board of sufficient length (the wrapping being done lengthwise); then the whole is tied at two or three places to keep the wire in place. All the turns of wire are cut in two at one end of the board, and the separate pieces pulled out from the other end and threaded through the holes of the frames. That process does very well when the wire used is in very large coils, because then it does not kink, or not enough to cause trouble. But it is impracticable with wire wound on small spools. No sooner would the piece of wire be drawn that it would assume a shape something like this:



The ordinary apiarist will never need a large coil of wire. A half-pound spool has enough wire to fill several hundred frames. I use something like the figure shown herewith. On a table, bench, or even a board, I drive a number of nails, as shown. Some are placed so as to hold the frame in place. Three of the others hold the pulleys (P) around which the wire passes. They must be small enough to permit the pulleys to revolve freely. It is better to put a washer under each pulley. I use sash pulleys from which the stems have been taken out. I just happened to have them. Some other apiarists who use a similar apparatus use, instead, empty thread-spools, probably also because they happened to have them.



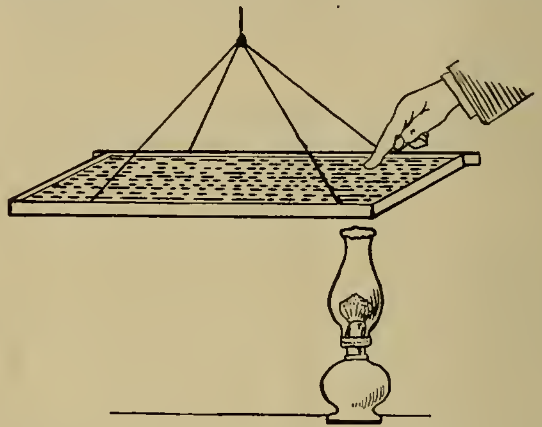
Another nail holds the spool of wire (W). This spool has a crank which permits revolving it with the hand. The crank is made by nailing a small piece of wood to the pulley; and a nail at the other end of the piece completes the crank. The end of the wire is pulled through the successive holes and around the pulleys, as shown in the foregoing figure, and finally fastened at the last hole (H). The operator then holds the crank (W) with one hand, and with the other he releases the wire from the different pulleys in succession, as shown in the above figure, turning the crank (W) so as to take up the surplus wire as fast as released. The wire is finally cut and fastened at A.



Looking at the figures and reading the above description impresses the mind as if the process were rather cumbersome. Practically it is not so. A frame is wired in less than a minute.

FASTENING THE COMB FOUNDATION.

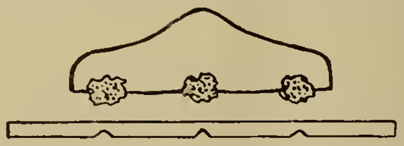
Now comes the fastening of the wax to the wire. The Spur imbedder and Easterday fastener will do in a measure, provided the wax is rather soft. I prefer using a lamp, as per Dr. C. C. Miller's method. At least I think the process is his invention.



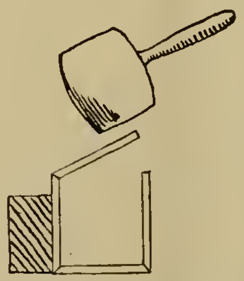
A string with four hooks is hung to the ceiling. A lamp is placed so that its glass chimney comes within about 2 inches of the foundation. A frame is hung to the hooks, and a piece of foundation placed in on the wires. The frame is then moved slowly over the lamp so as to follow the wire. The heat softens the wax and causes it to stick to the wire. A finger is held on the foundation so as to press it on the wire as it passes over the lamp. The light and wire can easily be seen through the sheet of wax.

FOLDING SECTIONS.

Don't try to fold the sections dry. Too many would break in spite of all the care one might take. The joints must be wet so as to be damp when folded. If the work is done at home, the method of wetting given by Dr. C. C. Miller is the best. Take out of the crate the few side-pieces that hide the joints of the sections—that is, the edges of the sections—and pour hot water in the joints. As the joints of every row of sections correspond, the water will go clear through and wet all of the sections properly.



I sometimes do the work in the apiary because I can easily take the crate of sections and the box of foundation on my wheel and do the work there under the shade of a tree. As I have not the facilities necessary for hot-water proceedings, I follow another process. Three small sponges are fastened to a small, flat piece of wood. This constitutes the instrument to wet the three grooves at a time. The wetting must be done on the back of the sections, as shown in the figure. Forty or 50 sections are wet and then folded before they get dry. The process is quicker than one would think when reading the above.



The folding is best done with a Hubbard machine. The next best is a mallet or a hammer with a wide, flat head. The operation is done on a bench or table, the section being folded against a block of wood nailed to the bench, so as to secure a square joint.

Fastening Comb Foundation in Sections.

In wetting the sections for folding, it is impossible to prevent the water from spreading more or less through the wood and thus dampen more or less the surfaces to which the wax must adhere. Now the wax will not "stick" well to a damp surface, and the foundation should not be put in the sections until they are perfectly dry.

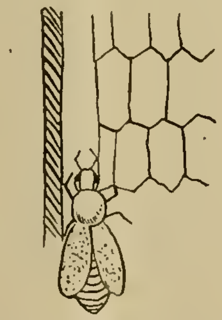
The Parker foundation fastener, and others acting by mere pressure, are not very satisfactory. They will work only when the wax is quite soft. When I need only a few sections I sometimes use the point of a knife or of a screwdriver instead of a Parker fastener, but it is only a makeshift at the best.

The Daisy fastener is all right—it is a daisy, sure enough, except, perhaps, that the plate should be arranged so that the dripping wax should come to the front and help fasten the next piece instead of running off. For small starters, say half sheets at most, there is a still better way. Just put a small tin dish, that you can make yourself, over a lamp or oil-stove. Taking the starter in the hand apply the bottom of it against the dish so as slightly to melt it, then apply it promptly to the section at the right place. The process is even quicker than the Daisy method, but is not practicable with full sheets.

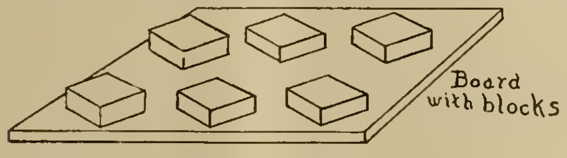
Full Sheets vs. Starters in Sections.

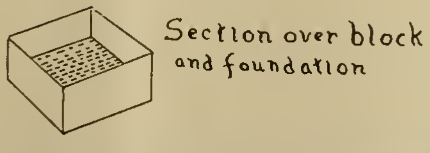
If only starters are used, I prefer to have them of a triangular form rather than a straight, narrow strip Exactly how it works I can not tell, but the sections are better filled. At least it seems so to me. But I would advise using full sheets whenever possible. They will be built into combs much faster, and that means more surplus, and, to some extent, less clogging of the brood-nest, and therefore less tendency to swarm.

The next question is, How full—that is, how near the wood along the sides and bottom must the sheet come? Of all the distances about ¼ of an inch seems the worst of all, as far as my experience goes. The bees draw the foundation, and then seem unable to reach properly the middle of the comb and extend it to the wood, something like this:



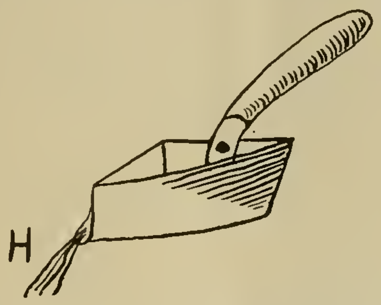
The best results are obtained by having the foundation reach *within one-eighth of an inch* of the wood. The bees will usually fasten it at once to the wood all around, and then but little bulging will take place—not enough to injure the sections, since the outer surfaces follow the separators.





If a dearth of honey follows putting on the sections, the bees sometimes gnaw out the edges of the sheets instead of fastening them. Fastening all around will avoid that. Furthermore, it is claimed that when the foundation is fastened all around with melted wax, the comb will never break off from the wood, no matter how far they are shipped. I fasten only at the top.

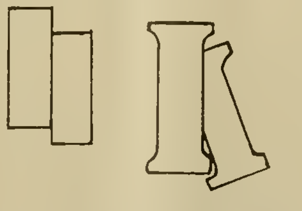
I have not been able to put in foundation with the Daisy fastener so that it would come within one-eighth or less of the bottom. The hot plate melts sometimes more, sometimes less of the sheet, usually entirely too much. I prefer to use the melted-wax plan. A dozen square blocks just the size of the inside of a section, and half the thickness, are nailed to a board. Pieces of foundation are placed on the blocks, and the sections slipped over. The melted wax (just enough, and no more) is poured then, say at the left-hand corner, and let it run to the bottom corner of each block. To pour the wax, I use a spoon made of tin which has a kind of spout shape with a very small hole (H), permitting the use only of the quantity of wax needed, and yet operate rapidly. If it is desired to fasten all around, the other corner is treated the same, and then the board turned upside down, and the other two sides fastened in the same way.



Sections and Separators.

The first 2 or 3 years of my bee-keeping I used bee-way sections with plain separators. Then Oliver Foster began advocating 4-bee-way sections without separators, chiefly on the ground that the bees could cluster better, and therefore secrete wax and build comb better. That is true to a large extent, but it depends upon the circumstances. With strong colonies and quite warm weather the difference does not amount to anything. Under the opposite circumstances it might make all the difference between a crop and nothing. If separators are omitted, use the 4-bee-way sections, by all means. The sections will be built far more evenly and regularly than with the 2-bee-way sections.

I have used the 4-bee-way sections without separators since then until now. I am now replacing them with the fences and plain sections. One reason is that even with the 4-bee-ways the sections of honey are not quite as regular as desirable for the best results. The other is that the plain sections are easier to handle. I don't know whether I can make this point understood or not. In handling sections it is not always possible to keep them perfectly even, sometimes they are little out of line with one another. In such cases a plain section is not liable to damage the next, while the corner of a 4-bee-way section will almost invariably gouge into the next one. Perhaps this figure may help the reader to understand what I mean.



Soft and Hard Comb Foundation.

The European writers tell us that the soft comb foundation made by the Rietsche press, plaster molds, etc., does not stretch and bulge like the hard ones—that is, the Weed and other hard-rolled ones. The explanation given is that in the hard-rolled, compact foundation the wax is in an abnormal condition, and that the heat of the hive causes the wax to expand back to its normal condition, and thus cause the bulging and stretching.

Recently it has been asserted that by heating the hard foundation as much as possible, and keeping it at that point a few moments (I suppose 10 or 15 minutes) it becomes as soft as the molded foundation, and stretches or bulges but very little when put in the hives. This kink is certainly worth a trial, anyway.

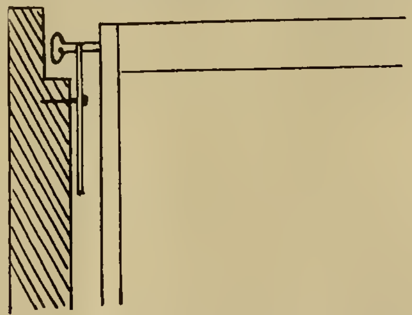
PRICES OF BEE-SUPPLIES.

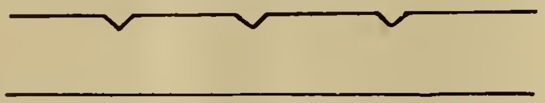
Much has been said lately about the prices of supplies being too high. That may be. But as long as the demand practically exceeds the supply, the prices will be stiff. If the honey-dealers were short, and running after us to get honey—my, my, how the prices would go up!

Well, if the price of hives is too high, make them yourselves—that is all there is to it.

Right here we need some clarifying, as Hasty would put it. As a matter of fact we are making them already, the dealers furnishing us only the lumber dressed and cut. So, after all, the question is whether we shall buy from them or order our stuff at the nearest wood-working establishment. The box-making concerns are likely to give the best satisfaction. To say that nobody but the bee-supply men can cut the lumber just right for hive-making is mere bosh. The assertion that a precision like clock or gun work is required constitutes also a considerable stretching. The chief points are the length of the frames. These must fit each other, and be the same for all the hives. If necessary the end-pieces must be nailed a little in or out, so as to preserve the exact inside length.

Of course, the so-called dovetail corners should be abandoned, and plain corners substituted. The frames should be plain, wood frames. The best, easiest made, and cheapest, are those hanging with nails on a tin strip. Small notches on the tin will hold the frames at the right spacing, and at the same time permit the apiarist to push them aside to take them out, or hold a queen-cage or queen-cell between them.





The stuff for frames should be ordered in long strips. For reasons too long to explain here, a short stick cut to length costs nearly as much as a strip 8 or 10 feet long. With a miter-box the apiarist can, in a short time, cut enough pieces to make all the frames he needs. To avoid danger of splitting the wood when nailing, the pieces can be clamped in a small hand-vise while driving in the nails.

Knoxville, Tenn.

Honey as a Health-Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food", written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey". It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey the more honey they will buy.

PRICES, prepaid—Sample copy for a two-cent stamp; 50 copies for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; or 1000 for $7.50. Your business card printed *free* at the bottom of the front page on all orders for 100 or more copies. Send all orders to the office of the American Bee Journal.

* * *

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get them subscriptions, for which work we offer valuable premiums in nearly every number of this Journal. You can aid much by sending in the names and addresses when writing us on other matters.

Our Sister Bee-Keepers

Conducted by EMMA M. WILSON, Marengo, Ill.

Bees Flying at Low Temperatures

Bees seem to chill quite easily when separated from the cluster, and yet they sometimes fly at quite a low temperature. On the morning of Nov. 14 the thermometer stood at 14 degrees in the shade. When it got up to 26 a very few bees could be seen flying. Evidently that was warm enough for them. Bees will be seen flying out in small numbers at a much lower temperature when they have been long confined; and many such bees come out only to meet their death. But Nov. 14 there was no pressing need of their coming out; there had been no long confinement. Indeed, they had flown the day before, and not only the day before but for 4 consecutive days immediately preceding. But there were two things that specially favored their flying—the sun was at its brightest, and the air its stillest. A day or two later not a bee was stirring when the thermometer was considerably higher; probably because there was something of a breeze from the northwest.

The Sisters and the National Convention

In putting the date of the National convention Dec. 19, 20, 21, if that is to be its date, the sisters do not seem to be taken into account. Christmas comes on the Monday following, and what chance will there be to prepare for it if those who are to make the preparation are expected to be at the convention? Very likely some of the brothers will say that from the 21st to the 25th there are 4 days, and ask how much more than 4 days are needed to prepare for Christmas. Little they know about it. They are accustomed year after year to sit down to the Christmas table groaning under its load of good things—I confess I never heard a table groan, but it sounds well to say it that way; the groaning is generally done afterwards by those who have stuffed themselves with the good things—they sit down and enjoy it all, with little thought as to how much time, thought, and labor it has all cost.

But there are no 4 days about it. If the convention closes Thursday night, the return home will be Friday—maybe Friday afternoon, maybe Friday evening—depends on the distance. At any rate, no sister will be in best shape to pitch right in the minute she takes off her Sunday clothes, so little or nothing will be done Friday; Sunday doesn't count, and there you are with Saturday the only day for making any previous preparation for Monday's gorge.

No, my good brother, it isn't all cooking, either. There are to be family gatherings—aunts, uncles, cousins, and all; and everything about the house is to be made spick and span. "No need of that if the house is already in decent order?" Now see here, who wants to be thought any poorer housekeeper than any other of the relatives? So the house must be overhauled from top to bottom, no matter how lately it has been done. At any rate, they all do it, and that's all there is of it.

"Not very much about bees in all this?" To be sure there isn't; but some of the sisters will feel better to have their minds spoken for them. SISTER BERTHA.

Sister Bertha, there's much truth in what you say; but there are two sides. The great matter that overrules all other items in getting together a large number at a National convention is the matter of railroad fares. A chief consideration in having the convention held at the given time and place was that at that time and place very low fares could be had. The Fat Stock Show—the biggest thing of the kind on earth, we are told—gave the low rates. Then a large number of bee-keepers would want to attend the Fat Stock Show anyhow, even if no sisters should be of that number.

When the date was first set, it was 2 weeks earlier; no trouble about Christmas then. But the building for the big show could not be completed in time, hence the postponement of a week. What else could be done but to postpone the bee-keepers' convention for the same length of time?

So we mustn't be too hard on the brothers.

There is, too, another item that counts for something, and for which the sisters are alone to blame. The proportion of them in attendance at conventions is so small that it ill becomes us to make much clamor about preparations being made just to suit our convenience. Let the sisters attend in large numbers, and no doubt their needs will have full consideration. At any rate, the particular chain of circumstances that made the trouble this time is not likely to occur again in many a long year.

Mr. Hasty's Afterthoughts

The "Old Reliable" as seen through New and Unreliable Glasses.

By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

Advertising Adulterated Honey.

No, we haven't got so far yet in the bad path of adulteration as publicly to advertise alleged candied honey at 3⅛ cents. Yet we have more call to improve than to brag. And when we get our door-yard a good deal cleaner than it is now, perhaps our shining example will move the Germans to clean up their door-yard, too. Page 758.

Well-Ripened Comb Honey.

A month in a hot room, *a la* Doolittle, is excellent for the honey before sending it to market. But the same time *on the hive* is still better; and *at some few apiaries* the conditions are such that the honey can well enough be left on the hive as long as you choose. That is, there are lots of bees and hives, but yield per hive always small. A suggestion of this kind is likely to raise something akin to a riot among many of our brethren. So wedded to the orthodox teaching that sections must be taken off the minute they are sealed—else the immaculate whiteness so much admired will be sullied. Truth. Not the only truth. And I think it is not by any means a hopeless task to get customers intelligently to prefer quality to looks. My experience with customers indicates this. And the experience of many grocers with the snow-white article is such that they get disgusted with selling honey, and quit keeping it. Small grocers, whose trade takes quite a while to carry off even one case, are especially liable to drop off this way. Here's a way of killing off the honey market that is not often talked about. I have had the pleasure of having a city grocer ask me what was the reason my honey kept in so much better order than the immaculate sections we have been talking about. Page 759.

Leaves for Winter Packing.

I see C. P. Dadant speaks favorably of leaves for winter protection. I am getting weak on them. Haven't kept the mathematics of the thing, but it seems to me that in an extra-severe winter a larger percentage of the colonies under leaves die, as compared with the colonies under chaff. Page 759.

Unlucky 14—Nuclei Swarming.

So 14 is an unlucky number now, 'cause Mr. Day had 14 colonies and somebody stole 1 and left him with 13. Mr. D.'s experience that 2-frame nuclei swarm after awhile, when swarming gets to be the rage, is not a thing to be surprised at. Page 763.

Nominations for the National.

I was interested in the discussion about nominations on pages 773 and 774. Logically, our Boss holds his own pretty well; but practically, the Review's main point impressed me the most. The object desired is to avoid re-electing the old incumbent *except when a majority really and earnestly desire a re-election.* If they do, the Review's plan will not do him any serious injustice. As it is, he is as sure to get the largest number as he was under the old plan to get the election. Then on the formal ballot the floating vote goes to him and elects him. Name one other name beside his, and hide the fact which has the most supporters, and we have done the most which can in fairness be done (it seems to me) to secure rotation—if that is what is wanted. If not, whence all these tears?

An American in Germany.

Glad Prof. Cook can reside in Berlin and yet prefer America, and think lovingly of it every day of his life. Page 774.

The "Outs" and the "Ins."

So the heavy fellows of New York were shy of a Honey-Producers' League with the honey-producers left out! What new thing is this in the world, that the outs should be suspicious of the ins? Page 775.

Black Bees vs. Italians.

And so able a brother as Allen Latham "doubts greatly whether any one can demonstrate that the black bee is inferior to the Italian in keeping out the 'moth.'" There you have it, good and hot. Sam's daughter just as strong as Sam's son. 'Spects it's good for the worshipers of the 3-banders to see how much depends on the color of the glasses with which one looks at a thing. As for me, I'll be propitious and chime in with Mr. L. Blacks get a worse reputation than they deserve for worm-hunting on account of their greater disposition to *quiescence* or summer hibernation. During such a period moth-larvæ may get more or less start in out-of-the-way crannies; but, pshaw! there's no danger of their triumphing over the colony. The sleepy disposition will be thrown off, and the fighting clothes pulled on, long before that happens. Italians incline to keep up extreme activity whether they are making anything at it or not. It's at least a legitimate subject of inquiry whether they really gain or lose by this, as compared with the quiescent tactics in lengthy times of dearth.

Interesting to see that Mr. Latham has been trying to rear choice black queens. He finds them hard to get mated, when Italians mate all right. His solution—that Italian virgins fly slowly, while black vigrins fly too swiftly to be overtaken—I doubt some whether that solution is the right one. Still, perhaps it may be. Page 775.

Doctor Miller's Question-Box

Send questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

☞ Dr. Miller does *not* answer Questions by mail.

Requeening—Fertilized Queens—Wintering Bees

1. When is the best time to requeen?

2. If I buy a queen of a responsible breeder, will she be already fertilized?

3. What is the best way to winter bees here—the coldest weather is about zero—to put straw around the hives, or put them in a dark cellar with no ventilation but a door?

Kansas.

Answers.—1. A good many think it is as well to leave the matter of renewing queens entirely to the bees. Others prefer to take the matter into their own hands and replace each queen when she has done two seasons' work. Possibly, however, you mean the best time in the year to introduce a queen. Not till the season is well under way; and special circumstances must decide whether it is better to operate in the harvest or near its close.

2. Yes.

3. As far south as 39 degrees in Kansas bees will likely do better out-doors.

Managing Swarms—Feeding in Winter

1. I have read in the bee-books that when the first swarm issues to hive it and set the hive on the old stand, putting the old hive as close as you can beside it, then a week later move the old hive some distance away. Now,

when I hive the first swarm, should I set the hive of the parent colony beside the swarm as soon as the swarm is in the hive, or should I wait until dark? And when I move the parent colony away, should I do it when bees from both hives are in the field at work, or should I wait until night when all are in their hives?

2. Is there an insect that works on honey when taken off? If so, how can it be prevented?

3. My neighbor gave me some colonies of bees that are very light, and have dot enough honey to last them the first part of the winter. I know they should have been fed early, but what is the best way now to feed them through the winter, and what? or must I lose them? They have plenty of bees.

IOWA.

ANSWERS.—1. If, when you set the swarm on the old stand, you leave the mother colony at some distance until night, you will be likely to get more of the bees with the swarm than if you at once set the old hive beside the swarm; but the thing will be evened up a week later. It will make more difference which way you do when you make the shift a week later. If you make the change after dark, there will be no change felt till the next day, and then the feeling will come gradually as each fielder leaves the hive and fails to return, If you move away the old hive at a time of day when bees are afield, and especially at a time when the young bees are at play, not only will you get the fielders to leave the old hive and join the swarm, but all the young bees at play as well, making the depletion greater than if you made the change after dark. So it will be a little better to make the shift when the bees are out at play.

2. I don't think of anything but ants likely to get the honey in this country, and you can shut out the ants or destroy them in their nests.

3. Don't think for a minute of losing those bees for want of food. If you have no combs of sealed honey, make cakes of candy as directed in your bee-book; or even feeding thick sugar syrup in a Doolittle frame-feeder or in a pepper-box feeder would be better than to let them starve.

◆

Bees and Tobacco Odor

As I keep about 15 colonies of bees I would like to have your advice. I have built a basement cellar this fall, in which I intend to keep my bees through the winter, and I am also raising tobacco. I would also like to use the same basement in which is the tobacco crop. Do you think that it would hurt the bees any to have the tobacco in the same room through the stripping—about a week's time. There might be some dampness and strong smell from the tobacco.

WISCONSIN.

ANSWER,—It isn't a good thing for people to live in the smell of tobacco, but I think the bees would stand it for a week. But there must be some arrangement to keep the bees darkened during that week.

Convention Proceedings

Report of the Texas Convention

BY LOUIS H. SCHOLL, SEC.

(Continued from page 825)

HOW TO PRODUCE EXTRACTED HONEY.

A. H. Knolle says there is good sale for extracted honey. Last year the demand was greater than for comb honey. If more was produced more of it would be sold, and it would cut out the cheap-syrup trade more than if comb honey was produced.

Mr. Robinson is an extracted-honey man. He builds the colonies up in two hive-bodies. He claims that old combs are detrimental to the production of first-class extracted honey, therefore he continually replaces them, working the old combs into the brood-chambers. He runs colonies three stories high during the honey-flow. During the winter he leaves an extra extracting super on the hive.

Mr. Butts uses full-depth supers for extracting.

Mr. Bell favors the full-depth over the shallow supers, as he has used both.

THE PRODUCTION OF SECTION HONEY.

H. A. Mitchell, who was on the program for this subject, was not present. He is the only extensive section-honey producer in Texas at present, and he produces annually much of this kind of honey. It is of the very best quality, and mainly from basswood. The honey is produced in 4½x4½x1⅜, narrow, 4 bee-way sections. This gives a thin comb with a large surface. He has won several premiums and a gold medal on his honey.

BEST AND SAFEST WAY OF INCREASE.

Mr. Laws said the best time with him to make increase is right after the honey-flow. He manages all his colonies for the honey-flow, and at the time of its close he makes the increase, either right after or while he is making his last extracting. He sees after taking off the combs of honey from the hives himself, while the boys take it to the extracting house. If he wishes to increase about 25 colonies in an apiary of 100, he has that many hives ready on new stands. As he comes to combs in the extracting supers which contain brood, he places them with the adhering bees into these prepared hives. Several combs of brood and honey are thus given to each, no attention being paid as to which hive the bees are from. A ripe queen-cell is then given and the nuclei are built up. Nearly every bee-keeper can have an abundance of cells at that time.

Mr. Atchley stated that it is easy to make increase in his locality, as there are fully 9 months in the year in which the bees are breeding heavily. The question with him has been, which is the *safest and cheapest* way of increase, as he sells many bees. He drives up to an apiary where he has his colonies in 2-story hives, taking with him 100 empty single-story hives with covers and bottom-boards. Then he draws one comb of brood and one of honey from each strong colony to make one nucleus. These he places in a hive until he has a load, when they are hauled off to a new location, so that the bees do not return to the old stands and so the bees from the old apiary do not molest them. Here each is given a virgin queen and they are built up with foundation. If there is no honey-flow it is easy to feed them, as there are no other bees to bother these small colonies off by themselves. They are not near to the apiary to be tantalized by the bees from it.

Mr. Milam said, as he stated before, that there are no two seasons alike. In an average year in his locality, April 1 is the best time for increase. The best flow comes April 15. He takes the old queen and all the bees on the same comb, gets two other combs of brood and bees, placing them in a hive on a new location. The old hive is given a queen-cell. He has about 15 to 18 combs of brood to a hive. The bees swarmed very much this year at the 1st of April, which made it a good season for increase. By removing the old queen, March 15, and dividing the colony into 1-frame nuclei, adding full combs of brood from time to time to build them up, he is enabled to increase 1,000 per cent in 2 years.

Mr. Atchley said that Mr. Milam's way of making nuclei is a good one, but a novice may lose from one-third to one-half of them if practised in the old yard.

Mr. Bell has studied the subject of increase thoroughly. While Mr. Atchley's way is a good one, it is not the safest. He bursts a strong colony half in two, simply dividing it. He dwelt for some length upon the Alexander method of increase, given in the bee-papers some time ago. All the brood is placed in an upper story above an excluder. The queen is put below on empty combs. In 10 to 11 days there are plenty of cells above, and the brood is in such condition that there is no danger of any loss. The upper story is set on a new stand, and in 2 weeks 2 colonies with a good queen in each is the result. The old queen is thus given a chance to do good work.

Mr. Atchley thought that his own plan was the best and safest for the novice, as the bees were taken away to themselves, where they could be properly taken care of. Besides, his method does not interfere with the colonies run for honey. He always increases from the strongest colonies with young queens, and never from colonies with old queens.

Mr. Victor keeps a colony from swarming after the bees have the "fever" by spreading the brood and placing between each comb a frame with foundation. The other brood-combs are placed in another body, arranged in the same way and set above the first, or the extra brood is used for increase.

Mr. Laws practices the "shook swarming" plan on such colonies. The colony is shaken into a new hive with only starters in the frames. The brood and some of the bees are set on a new stand for increase. He has had trouble about getting the bees to remain after shaking. If a comb of unsealed brood is given, queen-cells are started on it and the bees abscond to the woods. This they also do if sealed brood is given. A frame of honey keeps them. He favors the "shook swarming," both for honey and increase.

Mr. Aten advises that not more than 2 colonies be made from 1. He does not like the idea of dividing it into 10. It is so easy for a beginner to figure these things out on paper. For instance, a start is made with one 10-frame colony. This is divided into 10. Each one of these produces 100 pounds of honey—and failure is almost certain.

From the audience: "It would teach them a good lesson." (Laughter.)

Mr. White, in referring to the Alexander method, cautioned bee-keepers against placing the queen below the excluder on empty combs during cool or wet weather. There is danger of the bees clustering around the brood above, and leaving the queen below unprotected, where she may be chilled and succumb, or be injured so that she may become worthless.

If Mr. Victor wants increase for the same season's use, he makes it by removing the unsealed brood and the old queen to a new stand. This leaves the sealed brood and the old bees on the old stand, leaving it in an ideal condition for the honey-flow. For increase for future use he practises the method as outlined by Mr. Atchley, except that he gives more combs of brood and honey, 2 of each to a new hive. In 15 days he examines them to see that all have laying queens. Dividing a colony into 10 or so is too risky, as the danger of bees deserting the new hives is too great.

(Continued next week.)

* * *

Report of the Chicago-Northwestern Bee-Keepers' Convention, held at Chicago, Ill., Nov. 30 and Dec. 1, 1904

(Continued from page 826.)

THANKS TO MR. ROOT.

Mr. Moore—I move that we present to Mr. E. R. Root, towards his expenses, the sum of $5. Now, inasmuch as he has absolutely refused to accept anything, and says he will donate this sum to our foul brood fund; and inasumch as our whole assembly was greatly entertained and interested by his exhibition of last night, I move you a vote of thanks be given to Mr. Root for his very fine exhibition of last evening.

Mr. Kannenburg—I second that motion.

The President put the motion, which was carried unanimously.

EXPERIENCE WITH ALFALFA HONEY.

"Has any one had any experience with alfalfa honey, and with what success?"

Pres. York—I don't know whether it means producing alfalfa honey, or handling it, or eating it, or what. I would say it is very good to eat.

Mr. Becker—I want to say I don't know anything about its production. I know that alfalfa won't produce honey in our locality. But alfalfa honey as a honey I have sold on the market, and I think it is equal to white clover, or next to it, none excepted. It sells readily; everybody likes it. And there is another thing about it, there are a great many persons that cannot eat honey, but alfalfa they can eat in great quantities. I would advise those that handle alfalfa honey, or sweet clover honey, if the store-keepers will not sell it, to mix it with some darker honey, for instance with heartsease or even buckwheat. Buckwheat I have not had for a good many years, but I use heartsease and Spanish-needle. Invariably in my locality they say this alfalfa honey looks too much like sugar; it hasn't the color of honey. I sell a great deal of it every winter. When I get this honey at this time, and I am out of other honey, I go around and get some Spanish-needle and heartsease honey, and heat it all and melt it in order to produce a different color of honey. Alfalfa is too light a color to sell in the stores. But as to alfalfa, it outsells almost any other kind of honey.

The regular stenographer, Mr. Angus, having to leave for his train at this time, Mr. Hutchinson kindly reported the balance of the session as follows:

PAPER PAILS AS RETAIL PACKAGES FOR HONEY.

Mr. Abbott—A man in Colorado expressed to me a paper pail full of alfalfa honey. It reached me in good condition, and was of fine quality. It stood around in the office two days, when, by that time, it had all been eaten. If we could get hold of something like this to put up honey in for retail, it would be a fine thing.

ALFALFA HONEY CANDIES READILY.

Mr. Wheeler—When we mention alfalfa honey we are advertising a Colorado product; we ought to advertise our own honey. I have found that alfalfa honey candies very readily.

Pres. York—I have found that alfalfa candies very readily, and comb honey of this variety ought to be sold before cold weather comes on.

IS PURE ALFALFA HONEY HARD TO GET?

Some members expressed their doubts of the possibility of getting pure alfalfa honey. They thought it was largely mixed with sweet clover.

Mr. Abbott—I have been eating sweet clover honey for 20 years, and I don't think you can fool me with it. We get some honey from the West that is not all alfalfa, but I have no trouble in getting water-white alfalfa honey.

A bottle of honey, supposed to be sweet clover, was then passed around.

Pres. York—I have handled tons of sweet clover honey, and I should say that this is a sample of pure, sweet clover honey.

Mr. Snell—I get no surplus from alfalfa, but we have sent for some of the bacteria with which to inoculate the soil, and are hopeful of better results.

HAS ALFALFA HONEY SPECIAL MEDICINAL QUALITIES?

Pres. York—I have never heard that alfalfa honey possessed any special medicinal properties. I believe that basswood has been given that distinction.

Mr. France—I have sold my dandelion honey at an advanced price because of its supposed medicinal qualities.

Mr. Abbott—I suppose that all honey has medicinal qualities if it is used rightly. It is peculiarly effective in bronchial diseases.

WHAT IS AN UP-TO-DATE APIARY?

Mr. Horstmann—Where all of the hives are of approved pattern, the weeds and grass kept mowed, where there is an extractor used, and everything kept neat and clean.

Mr. Wilcox—I suppose that no old straw hives are used, and everything is kept neat.

SHEEP FOR KEEPING DOWN GRASS IN THE APIARY.

Mr. Reynolds—Sheep sometimes knock over the hives.

Mr. Wilcox—I don't know as I would at all times turn in the sheep, but, in the honey season, it seems to me it would be all right.

Mr. France—In procuring a site for an out-apiary, I select a pasture. The stock soon learns to work in the apiary at night. If hogs go into the yard, I want the hogs to have rings in their noses.

CAN HONEY-VINEGAR BE MADE AT A PROFIT?

Mr. Meredith—Waste honey can be used profitably for that purpose.

Mr. France—We can get a good price for honey-vinegar in our home market where we and the vinegar are known. I would advise the use of waste honey from washing cappings, the washing of dishes that have contained honey, etc.

Mr. Wilcox—If we have honey that will sell at 4 or 5 cents per pound, can it be made into vinegar with profit?

Mr. France—I think not.

Mr. Hoffman—Give the process for manufacturing vinegar.

Mr. France—Make a solution of honey and water that will float an egg, then let it stand until it has turned to vinegar. That is all there is to it. There are quicker processes than this—those that expose it to the air more thoroughly than this—but it will not pay the ordinary bee-keeper to bother with them.

(Continued next week.)

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Cosmopolitan	1.00
Pearson's	1.00
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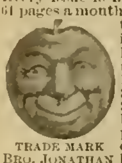

The Best Fruit Paper

is The Fruit-Grower, published monthly at St. Joseph, Mo. The regular subscription price is a dollar a year but if you will write for free sample copy and mention this paper, you will receive a proposition whereby you may secure it one year WITHOUT COST. Every one who has a few fruit trees or a garden, should read

THE FRUIT-GROWER
ST. JOSEPH. MISSOURI

Every issue is handsomely illustrated and from 32 to 64 pages a month are filled with interesting matter pertaining to fruit-growing and gardening. The first four issues of 1906 will be handsome special numbers devoted to the following subjects: January, The Horticultural Societies; February, Spraying; March, Gardening; April, Small Fruits. Any one of these numbers will be worth a dollar to you. We publish the "Brother Jonathan Series" of fruit books. Send your name and learn how to secure these books free.

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Fruit-Grower Co., 107 S. 7th, St. Joseph, Mo.

Mention Bee Journal when writing.

CONVENTION NOTICES.

National Convention, Dec. 19, 20, 21.—The Fat Stock Show, upon which we have depended for reduced rates on the railroads, has been postponed two weeks, so the dates for the convention will now be Dec. 19, 20 and 21, 1905.

The place of meeting has also been changed to Brunt Hall, in the Bush Temple of Music, corner of North Clark Street and Chicago Avenue (entrance on Clark Street,) 5 minutes walk north from the Revere House, Southeast corner N. Clark and Michigan Sts., which will be headquarters for the members.
W. Z. HUTCHINSON, *Sec.*

The Chicago-Northwestern Bee-Keepers' Association will hold a social session at the Revere House, Dec. 19, 1905, at 10 a.m. At 2 p.m. the same day will be held the regular annual election of officers. Any other business coming before the meeting will be attended to. HERMAN F. MOORE, Sec.

New York.—The annual convention of the St. Lawrence and Jefferson Counties Bee-Keepers' Association will be held at Watertown, N. Y., Dec. 13 and 14, 1905.
GEO. B. HOWE, Sec.,
Jefferson County Association.
Black River, N. Y.

New York.—The annual meeting of the Oswego County, N. Y., Bee-Keepers' Association will be held at Fulton, N. Y., Thursday, Dec. 14, 1905. Dr. E. F. Phillips, who is furnishedby the Agricultural Department, is expected to be present and address the meeting.
MORTIMER STEVENS Pres.
CHAS. B. ALLEN, Sec.
Central Square, N. Y.

New York Bee-Keepers' Institutes.—A series have been arranged to be held in New York State as follows: Amsterdam, Dec. 11, 1905; Syracuse, Dec. 12; Watertown, Dec. 13; Fulton, Dec. 14; Auburn, Dec. 15; Romulus, Dec. 16; Geneva, Dec. 18 and 19. Dr. E. F. Phillips, Acting in Charge of Apiculture, United States Department of Agriculture, will attend and address these Institutes on subjects pertaining to bee-keeping.
Romulus, N. Y. C. B. HOWARD, Sec.

The New York State Association of Bee-Keepers' Societies will hold its annual meeting at Geneva, N.Y., at the Nester Hotel, Monday and Tuesday, Dec. 18 and 19, 1905. New and interesting subjects are to be introduced and discussed at this meeting, and all bee-keepers of New York State should make arrangements to be present. Good and reasonable accommodations have been secured. Headquarters will be at the Nester Hotel.
Romulus, N. Y. C. B. HOWARD, Sec.

New York.—A Bee-Keepers' Institute will be held in the parlor of the Central Hotel, Market Street, Amsterdam, N.Y., on Monday, Dec. 11, 1905. This meeting will be held under the direction of the Bureau of Farmers' Institutes of New York State Department of Agriculture, by the Fulton and Montgomery Counties Bee-Keepers' Society, assisted by the United States Department of Agriculture. Dr. E. F. Philips, Acting in Charge of Apiculture United States Department of Agriculture, is expected to be present and address this meeting, and a good attendance is much desired. T. I. DUGDALE, Sec.
West Galway, N. Y.

$12.80 For 200 Egg INCUBATOR
Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day
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Facts are what the farmer wants, whether buying a team or a telephone. If you want to know how others have built successful telephone lines write at once for our new free book 80-H, "How the Telephone Helps the Farmer." It gives facts you ought to know about telephones for farm use, and whether you buy

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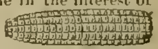
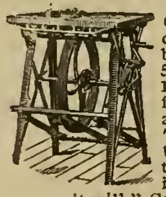


Farm and Stock is an illustrated monthly magazine in the interest of CORN BREEDING, Cultivation and Live Stock. Price $1 a year, but for a short time will be sent a year on trial for 10c and names of ten farmers who grow corn.
Farm & Stock, 228 Charles, St. Joseph, Mo.



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Special Sale on
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Until March 15. Dovetail Hives, 8-frame, 1½-story, 1.25; 10-frame, $1.40; No. 1 bee-way Sections, 3.90; No. 2, $3.40; 24-lb. Shipping-Cases, 13c; Foundation, Smokers, etc., cheap. Send for 24 page Catalog free.

W. D. SOPER,
Rural Route 3, JACKSON, MICH.
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If you are interested in Pigeons, Rabbits, Cavies, Dogs, Cats, Birds or Pets of any kind, you should send for a **free sample** of **PET STOCK. It's the Best Publication of its kind in America.** Has a national circulation, and it's only 50c a year. Address, **PET STOCK,**
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via the Nickel Plate Road between Chicago and Buffalo. Dates of sale Dec. 23, 24, 25, 30 and 31, 1905, and Jan. 1, 1906, at a fare and a third for the round-trip, with return limit of Jan. 3, 1906. Through train service to New York City, Boston, and other Eastern points. No excess fare. Individual Club Meals served in Nickel Plate dining cars. Three through trains daily from La Salle and Van Buren St. Station. The only depot in Chicago on the Elevated Loop. 39—49A3t

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Never Go Out
And last from 5 to 21 years

BINGHAM Original Direct Draft CLEAN Bee Smokers

Pat'd 1878, '82, '92 & 1903

Tin 4-in. Smoke Engine 3½-inch 3-inch 2½-inch 2-inch Wonder
$1.50. $1.10. $1.00. 90c. 65c—per mail.

Sent on receipt of price per mail.

T. F. BINGHAM Farwell, Mich.

OTISVILLE, PA., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine.

FRED FODNER.

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That's how they live and thrive. You can't have healthy, profitable fowls or stock and have lice too.

Lambert's Death to Lice

promptly kills all insect vermin and makes sitting hens comfortable. Sample 10c; 100 oz., $1.00 by express.

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Is what we are making for our customers.
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SPECIAL.—A quantity of Dovetail and Wisconsin Hives, slightly damaged by water, in packages of 5 at $1.25 per hive for 1½-story 8 frame; 10-frame, $1.40 per hive. Satisfaction guaranteed.

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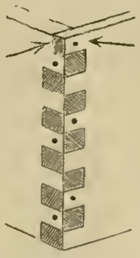

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corner that we have told you about, and as you will see it can't warp nor split off as it passes by and nails firm to the side. Prices right—quality right—workmanship right.

Our discount discounts everything. Postal gets a circular.

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We will allow you the above Discount on all Orders accompanied by Cash during December. Send for our Catalog.

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Two Years for One Dollar!

After a man succeeds in publishing a good journal, the next step is that of getting it into the hands of the people, of getting them to reading it, and becoming acquainted with its merits. This can be done by advertising, sending out sample copies, circulars, etc. All this costs money. I think I am safe in saying that for every new subscriber I have received I have paid out $2.00 in advertising; hence, I have often said that a publisher of a good journal could afford to send his paper one year free, for the sake of getting it into new hands. It would cost no more than other forms of advertising, and would be very effective, but, for obvious reasons, this plan could not be put in practice, but I am going to come as near to it as I can. I have between 200 and 300 complete sets of back numbers for the present year, and as long as the supply holds out I will send a complete set, and the rest of this year free to any one who will send me $1.00 for the Review for 1906.

The Review for 1905

It is impossible, in this space, to more than touch briefly upon a few points. Perhaps the leading feature for the year is a series of articles on keeping bees in large numbers.

10,000 Colonies

in the aggregate are owned by a dozen men whose articles appear in the Review for this year. No one of these men has less than 400 colonies, and one has 1700! These men have kept bees in large numbers. They have succeeded. They have made money. They point the way for others. They tell how many colonies in the home-yard will justify the starting of an out-apiary; how far apart out-apiaries ought to be located; how locations should be selected; the best methods of traveling from apiary to apiary; how hives and increase shall be secured; what kind of honey shall be produced; how to solve the swarming problem; what are the greatest obstacles, and how to overcome them.

Perhaps the one article that attracted the most attention was by H. G. Sibbald, of Canada, and was entitled

Ahead of Shook-Swarming.

The article described a method possessing the following advantages: No shaking of the bees; no handling of the brood; no possibility of the queen being in the wrong hive; no danger of after-swarming; no increase unless desired (but easy if wanted); no queen-cells to hunt up and destroy, yet the whole force of bees may be kept together the whole season, and each colony may be requeened with a queen from a naturally-built cell.

There is no doubt that there are thousands of

Dollars Wasted

in the rendering of wax that might be saved if proper methods were employed. The best article that I ever saw on the subject was written by Mr. E. D Townsend, and appeared in one of the issues of the Review for this year. The number of new and practical ideas furnished by him in regard to the profitable and comfortable rendering of wax will be a surprise, even to the veterans. He also illustrates and describes a wax-press that any person of ordinary ability can make for only $3.00 or $4.00, and it is the equal, if not the superior, of a high-priced, factory-made press.

Tip the Hive Over

so that it will rest upon its back end, use a little smoke along the lower edges of the brood-combs, and it is an easy matter to determine if the bees are building queen-cells and getting ready to swarm. The only difficulty is that the supers are likely to slide off. but Mr. F. G. Cyrenius has invented a simple, cheap clamp that can be put on the hive in five seconds, no matter how many supers there are upon it, and it will hold the supers on so securely that the hive might be rolled about the yard without their coming loose. By this arrangement it is an easy matter to examine 100 colonies in an hour without ever opening a hive. It was illustrated and described this year in the Review.

Advanced Bee Culture

A new edition of this book will be out some time this month, and, without doubt, will be the most beautifully gotten up bee-book that has ever been published in this country. It is printed on heavy enameled paper, profusely illustrated with beautiful halftone engravings, and the front cover embellished with a green vine of clover—a golden bee sipping honey from one of the snow-white blossoms.

Most important of all, however, is the simplicity and freshness, the inspiration and real *helpfulness* of its contents. From years of experience as bee-keeper and editor, I have told in plain, simple language, what I believe to be the most advanced methods of keeping bees for *profit*, from early spring to the end of the year. The book is almost wholly re-written, and contains nearly twice as much matter as did the former editions. In short, every man who would make the most money out of bee-keeping as a business, *must* have the book.

The price of the book will be $1.20, postage paid; or the Review and the book for only $2.00. If you send $2 00 before the back numbers of the Review are all gone, the back numbers will be sent just as soon as your order is received, your name placed upon the subscription list to the end of next year, and, as soon as Advanced Bee Culture is out (probably two or three weeks) it will be mailed to you.

W. Z. HUTCHINSON, Flint, Mich.

FOR SALE HONEY-JARS

The No. 25 Honey-Jar, Porcelain Cover, Metal Screw Cap, absolutely tight, holding One Pound of Honey, Net, in shipping-cases of one gross each:

1 gross lots	$4 50 per gross
5 " "	4.00 "

Also in strong **RE-SHIPPING CASES** of two dozen each, heavy corrugated partitions, sides, top and bottom—a perfect protection—

1 case lots	$1.00 per case
5 "	.95 "
10 "	.90 "

Eight ounce Tumblers, tin caps, 3 dozen in re-shipping case:

5 case lots, per case, 3 doz	85c
10 " " "	80c
20 " " "	75c

F.O.B. New York. Prompt shipment on receipt of order.

HILDRETH & SEGELKEN,
265 & 267 GREENWICH ST., NEW YORK, N. Y.
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For Sale—25,000 Lbs. of well-ripened Spanish-needle Extracted Honey put up in new 60-lb. tin cans—6c a pound for the lot, or 6½c for less, **F. J. GUNZEL, Weiner, Ark.**
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Until further notice, finest quality new crop California Water White White Sage and Light Amber **HONEY** in 60-lb. tins, 2 in a case; new cans and new cases Write for prices and samples, and state quantity you want.

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NEW COMB HONEY-CROP OF 1905

We believe it would pay those having it in car lots or otherwise to write us. Give us your lowest spot cash prices, and fully describe the goods and style of package; when you can ship, etc. We handle more of these goods than any other firm in the U.S. Yours for business,

THOS. C. STANLEY & SON. Bees and Honey
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Fancy White Comb Honey in Non-Drip Shipping-Cases; also White Clover Honey in cans and barrels. Please send samples and state your lowest price, delivered here. We pay spot cash upon receipt of goods.

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Nov. 1	9 percent	Feb. 1	6 percent
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We handle **LEWIS' GOODS**, and carry a large stock, which insures prompt shipment. Catalog free. Address,

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Complete stock for 1905 now on hand.
Freight rates from Cincinnati are the lowest,

ESPECIALLY FOR THE SOUTH, AS ALL FREIGHT NOW GOES THROUGH CINCINNATI.

7 Percent Discount

For Cash Orders Received in

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This applies to all goods with exception of Shipping-Cases and other Honey-Packages for current use.

C. H. W. WEBER CINCINNATI ...OHIO...
Office and Salesrooms, 2146-48 Central Ave. Warehouses. Freeman and Central Aves.

Honey and Beeswax

Chicago, Nov. 17.—There has been a steady trade in honey to the small dealers who usually lay in a little stock at this time of the year. Prices are practically unchanged. The fancy grades of white comb bring 14@15c; that which is a little off 1@2c less; amber grades, 10@12c; dark and damaged lots, 7@10 cents. Extracted, white. 6@7½c; amber, 6@7c. Beeswax steady at 30c. R. A. BURNETT & Co.

Kansas City, Oct. 9.—The honey market here at present is very strong at $3.25 per case for No. 1 and fancy white comb in 24-section cases; amber and other grades selling for less according to quality. Extracted in good demand at 6½c. Beeswax, 28c.
C. C. CLEMONS & Co.

Cincinnati, Nov. 24.—The demand for comb honey is relaxing to some extent, owing to the majority of the trade being well supplied. All fears of a comb honey famine have been allayed. We quote fancy white comb honey at 14@16c. Extracted honey is in fair demand. Quote amber at 5¼@6½c, according to the package and quality. Fancy white and white clover extracted at 6½@8½c. We are paying 28½c per pound delivered here for choice yellow beeswax.

(We wish to call the attention of the producer to the above honey quotations, who mistakably expects to receive these prices for his product. The above are our selling prices.)
THE FRED W. MUTH Co.

Toledo, Oct. 17—The honey'market remains firm, with good demand, and prices the same as last quotations. Fancy white comb brings 15c; No. 1, 14c; fancy amber, 13c; buckwheat, 13c. Extracted, white clover, in barrels, 6¼@6½c; amber, in barrels, 5@5¼c; in cans, 1c to 1½c higher. Beeswax in good demand, 26c cash, 28c trade. GRIGGS BROS.

New York, Nov. 17.—There is a fair demand for all grades of white as well as buckwheat, and receipts are about sufficient to meet the demand. Prices are unchanged. We quote: Fancy white, at 14@15c; No. 1, at 12@13c; amber, at 11@12c; buckwhest, at 10@11 cents. Extracted honey: Market is well stocked with California, which is coming along in large quantities. The demand is fair mostly in small-sized lots. Prices remain about the same, 5½@6½c per pound, according to quality and quantity. Southern in barrels at 52@57c per gallon. New crop West Indian is now beginning to arrive and is selling at from 60@63c per gallon. Beeswax firm at 28@30c per gallon.
HILDRETH & SEGELKEN

Philadelphia, Nov. 20.—The demand has been very good for honey in the past 10 days. In fact, it takes a little sharp, cool weather to get people started, and when they do start, the demand continues for some months. We would say, now is the height of the honey season. We quote, in a jobbing way: Fancy comb, 15@17c; No. 1, 13@15c; amber, 12@13c. Extracted, fancy white, 7@8c; amber, 6½c. Beeswax firm at 28c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

Albany, N.Y., Nov. 8.—Our honey market is in healthy condition; demand good; receipts about equal to demand. Prices are not quite as high as last year, but the tendency has been to work off the honey before cold weather, and we think the crop has come forward more than usual this season, which is a good sign. We quote: Fancy white clover, 15c; A No. 1, 14c; No. 1, 13c; buckwheat, fancy, 13c; A No. 1, 12c; No, 1, 11@12c; straight buckwheat is wanted in this market. Extracted, quiet; white, 7½c; mixed, 6½c; buckwheat, 6½c. Beeswax scarce at 30c. H. R. WRIGHT.

Indianapolis, Nov. 7.—There is a tendency for higher prices on best grades of honey. The demand for strictly fancy white comb honey exceeds the supply. Demand for lower grades of comb honey not good. Numerous shipments of honey arriving, but no one producer seems to have very great quantities to offer. I quote fancy white at 15@16c; No. 1 in poor demand at 12c, and amber dull at 10c. Best grade extracted brings 8@9c in 60-lb. cans; amber slow at 5c. Beeswax, 28@30c. WALTER S. POUDER.

Denver, Nov. 11.—No. 1 white comb honey, per case of 24 sections, $3.35; No. 1 light amber, $3.00; No. 2, $2 50@3.00. Extracted honey, 6¾ @7 cts. per pound. Supply is light and we could make quick sales of consignments at above figures. We pay 24c for clean, yellow beeswax delivered here.
THE COLO. HONEY-PRODUCERS' ASSN.

Cincinnati, Nov. 17. — The nice weather holds back the demand for comb honey. Crops seem to be exceedingly short and producers in the West keep the prices high. We quote as follows: Fancy water-white and No. 1 white clover, 14@16c; No. 2, 12@14c. Extracted seems to be more plentiful, and we quote same in barrels, light amber, 5¼@5½c; in cans, ½c more; white clover, 7@8c. Beeswax, 28@30c.
C. H. W. WEBER.

San Francisco, Nov. 22.—White comb. 1-lb, sections, 8@9 cents; amber, 6@7c. Extracted, water-white, 4¾@5c; white, 4½@4¾c; light amber, 3¾@4 cents; amber, 3@3½c; dark amber, 2½@3c. Beeswax, good to choice, light, 26@27c; dark, 25c.

Plenty of honey is now offering at the appearing quotations, but very little trading is being done, as dealers generally are of the opinion that lower prices will prevail. The quality of the receipts has been good so far this season and would indicate that the crop is quite large.

FANCY WHITE EXTRACTED HONEY

CRATES 2-60 LB. CANS; 8c
TWO OR MORE CRATES; 7¼
LARGER LOTS; WRITE FOR SPECIAL PRICES. ALL F. O. B. CINCINNATI. CASH WITH ORDER. SAMPLES 10c. TO PAY POSTAGE.

THE FRED W. MUTH CO.
No. 51 WALNUT STREET, CINCINNATI, OHIO.
SEND FOR CATALOG OF BEE SUPPLIES WITH SPECIAL DISCOUNT.

FOR SALE

Extracted Honey—Fancy white, 7c; fancy amber, 6½c; ¼c less in 5-case lots or more.
C. C. CLEMONS & CO.
45Atf KANSAS CITY, MO.

HONEY AND BEESWAX

When consigning, buying or selling, consult
R. A. BURNETT & CO.,
199 SOUTH WATER ST. CHICAGO, ILL.

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* * *

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AMERICAN BEE JOURNAL

45th Year CHICAGO, ILL., DECEMBER 14, 1905 No. 50

Officers-Elect of the National Bee-Keepers' Association for 1906

President C. P. Dadant.

Vice-President Geo. E. Hilton.

General Manager N. E. France.

Secretary W. Z Hutchinson.

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY
334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

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2d.—To protect and defend its members in their lawful rights.
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General Manager and Treasurer—
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(INCORPORATED)

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OUR HIVES AND SECTIONS

Our hives and equipment, both for workmanship and clearness of stock, can not be excelled, and we doubt if they have ever been equalled. So strong is the demand for these goods that there has been a strife in many cases among dealers to get the Root Company's lines because they knew that everything that bears the Root brand is always popular with the customer, and always the best that money and brains can produce.

Our sections and frames for 1906 are even better than ever. They are inspected and re-inspected, and each inspector is required to put in each box of sections that he passes upon his own inspector's card, so that if complaint is made this card will come back on him. As he is anxious to hold his position and if possible get an increase in pay, it is clearly to his interest, as well as that of the customer, to let nothing but perfect goods pass.

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Our extractors for 1906 in point of improvements and quality of workmanship leave everything else in the shade. The four, six and eight frame machines have the finest automatic reversing mechanism that has ever been put into a machine. Even the two-frame models can have the reversing mechanism put on at a slight additional cost; but we do not ordinarily advise buying the two-frame automatic. Steel construction has been substituted for cast iron wherever practicable.

OUR CATALOG FOR 1906

A great improvement over last year. Entirely revised and rewritten. New cover. New cuts. Every article is classified. No price-tables to confuse. The price of each article is directly under the description or illustration. The first edition is now on the press. If you wish a copy of this let us have your name *now*.

CHRISTMAS 1905
GLEANINGS
IN BEE
CULTURE
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December 15th Gleanings

When this issue of the American Bee Journal reaches you our Splendid Christmas Issue will be ready for mailing. Without doubt the finest bee-magazine ever printed. Three-Color Cover. 100 pages of matter. Many beautiful halftones. Extremely valuable articles. We have a limited number of copies which we will sell at 10 cents each. Better send 25 cents *now*, and we will send the Magazine for 6 months' trial, and include this number, or, better still, send $1.00 for the year. You will find Gleanings in all principal clubbing lists.

* * *

THE A. I. ROOT COMPANY, Medina, Ohio

BRANCHES: 144 Erie St., Chicago 10 Vine St., Philadelphia 44 Vesey St., New York

Established in 1861
THE AMERICAN
Oldest Bee-Paper in America
BEE JOURNAL

(Entered at the Post-Office at Chicago as Second-Class Mail-Matter)

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor CHICAGO, ILL., DECEMBER 14, 1905 Vol. XLV—No. 50

Editorial Notes and Comments

National and Chicago-Northwestern Conventions Next Week

Next Tuesday evening (Dec. 19) the National convention will begin its annual sessions in Brunt Hall, Bush Temple of Music, corner of Chicago Avenue and North Clark Street, Chicago.

The Revere House, corner of North Clark and Michigan Streets, will be the hotel headquarters of the convention.

Also, at the Revere House, next Tuesday, at 2 p.m., will be held a business session of the Chicago-Northwestern Bee-Keepers' Association.

It is hoped that there may be a large attendance of bee-keepers at all the sessions of both Associations.

Treatment of Bee-Slanders

Clippings sent in by different persons show that the yarn about the ruin of the grape crop by the bees in Indiana has been widely copied outside that State as well as inside. While items of this kind are always welcomed at this office, it does very little good to refute slanders upon the bee in these columns. The readers of the American Bee Journal do not need informing in this direction; the people that do not read bee-papers are the ones that need informing. The place to do the most good is where the harm has already been done—in the newspapers which contain the slanders. If each bee-keeper who finds in his paper some incorrect utterance regarding bees would at once send to such paper a correction respectfully worded, such correction would generally be received in a kindly spirit, and much good would result. On page 794 an instance is given. Let others be ready to help on the good work.

Influence of Larval Food

During the past few years there has been much interest among Australian bee-keepers regarding what seemed a sort of mysterious disappearance of bees, whole apiaries being almost entirely swept away. Mr. R. Beuhne has been an especial sufferer, and, as reported in the Australasian Bee-Keeper, he now thinks the trouble may be traced to the pollen consumed. Not that the pollen is at all poisonous to the older bees, but that it is so deficient in the right kind of material that larvæ fed upon it are deficient in stamina, and succumb easily to adverse conditions, both in the cell and after emerging from it. Mr. Beuhne says:

> "Dr. Cherry demonstrated by scientific reasoning that ill nourishment of the larvæ resulted in lack of vigor, and impaired vitality in the perfect insect. It is not a question of quantity of food, but one of quality, a deficiency of nitrogen. As bee-keepers, we know that a deficiency in quantity of larval food is corrected at once by the worker-bees in restricting brood-rearing, or, should it occur suddenly, by throwing out eggs and even larvæ. We have no proof, however, that bees can discriminate as to the quality of the pollen, and even honey. In fact, we do know that they sometimes have recourse to substitutes; they occasonally store flour for pollen, and fruit-juice for honey, both of which decompose in the combs under certain conditions of atmosphere. Assuming, however, that bees will use these substitutes only under stress of circumstances, which would be evident even to the bee-keeper, and leaving them therefore out of consideration, the report of the analysis of pollen we have received from Dr. Cherry shows that the percentage of protein, that is nitrogen, in a digestible form is very variable in different kinds of pollen, ranging from 27 percent down to 17 percent.
>
> "As you all know, all larvæ under normal conditions are supplied by the nurse-bees with all the food they can absorb, and in the case of queen-larvæ with a surplus, so that deficiency in quality could not be made good by additional food. Taking the best sample of pollen and the worst, that with 27 percent of protein and that with only 17 percent, we find the larvæ consuming the latter get more than one-third less protein in the same quantity of food than the former, resulting in feeble resistance to disease-germs in the larval stage, and weakness, predisposition to disease, susceptibility to cold, and premature wearing out of the perfect insect."

Raising the Price of the American Bee Journal

We have received the following from one of our interested readers:

> Mr. Editor:—Replying to your call for suggestions that will make the American Bee Journal more helpful to its readers, I venture one or more that possibly may not occur to all others, because their bearing is indirect rather than direct.
>
> I take it for granted that any editor and publisher who has been in the business as many years as you have, and has studied as you appear to have done to cater to the wants of his readers, has dreamed out a number of things that he would like to do, and could do if he had an unlimited bank account on which to draw, without caring how much of it came back again.
>
> So, instead of hinting at this thing and that which you may have already thought of, or which may be suggested by others, my suggestion is that you *put more money into*

the Journal, and thus be able to carry out some of your dreams for improvement. Truly an original thought!

"Can't put into it more than you can get out of it?" Just about what I thought you'd say. Well, then, you must get more out of it.

"How?" The simplest thing in the world; *ask more for it*. Instead of having the subscription price one dollar a year, make it a dollar and a half.

Now, look here; before you dismiss that suggestion with a wave of the hand, and the curt reply that you can't get enough subscribers at a dollar, and if you asked a dollar and a half your list would drop so low that sure failure would follow, just give me the floor long enough to make a few remarks.

Your subscribers are possessed, no doubt, of a considerable degree of selfishness, as people in general are, and they probably have no desire to pay more money for the simple purpose of having you get more. But even admitting their selfishness—and I may say by way of parenthesis that bee-keepers as a class will compare quite favorably with mankind in general in the matter of unselfishness—they are at the same time an intelligent lot, and they understand that it is true economy to pay a higher price for a really good article rather than a lower price for something not so good. So a large proportion of them would be willing to put more money into the American Bee Journal if they can get the worth of their money.

Indeed, they would no doubt be willing to pay a good bit more for the said Journal if they were sure it would never be a whit better than it is now—at least many of them would—and the proof lies in the prices that many of them do pay now for other bee-papers. Fifty cents or a dollar a year for a paper that comes once a month. That makes each number cost 4⅙ cents or 8⅓ cents. Take the smallest amount, 4⅙ cents. If they are willing to pay that for another paper, why do they not pay it for yours, each number of which contains as much matter, and at least of as good quality? Simply because you do not ask it. Let us see: If they should pay 4⅙ cents for each of the 52 numbers of the American Bee Journal, that would make $2.16 a year. If they *are* paying to others at that rate, why not to you? Still more willingly ought they not to be willing to pay a little less than three-fourths of that, making it $1.50 a year?

They would do so all the more cheerfully because they understand that any publication that depends for its patronage upon a special class must necessarily be at a higher price, as witness the price of journals for the different professions, trade journals, and church journals. Also because there is now an upward tendency of prices in general, and a number of the literary monthlies have raised their prices.

Please don't understand that in the foregoing I am moved by an unusual amount of altruism. Simply as a business proposition I want more value, and as a matter of common honesty I'm willing to pay the price.

A Constant Reader.

Really, there is no getting away from the arguments advanced by "A Constant Reader" in the foregoing.

He also hits the nail squarely on the head when he says that we are desirous of improving the old American Bee Journal still more. And the only thing that prevents doing it to the extent we would like to do is the "limited bank account." Any one who knows even a little bit about publishing a bee-paper knows it is no bonanza. But we are not looking for bonanzas or riches. What we want is to do a straight, honorable business, and make a fair living at it—and at the same time be a help to others. But if prices of labor and materials continue to increase we will be *compelled* to raise the subscription price of the American Bee Journal, and say nothing about improving it.

We think it is no egotism for us to say that the American Bee Journal is the cheapest bee-paper in America to-day, and its contents second to none. We believe the best bee-keepers would endorse that statement. Then it ought to have the largest circulation of any of the bee-papers. Why it hasn't it is doubtless because it is published at so low a price as to prevent pushing it adequately, and also because it has not some larger side-line of business with which to boost it up—such as manufacturing bee-keepers' supplies, as several of the other bee-papers have back of them.

But we do not wish to raise the subscription price of the American Bee Journal if we can possibly avoid it. No doubt most of our readers would willingly pay the increased price, but why not, instead, turn in and help increase its list of regular readers sufficiently, and thus insure its price remaining at one dollar a year? Many charges, or expenses, are fixed, whether the circulation be ten thousand or thirty thousand. For instance, the cost of office help and rent, typesetting, engravings, etc.—these and some other expenses are just the same on ten thousand copies as on fifty thousand. So if we could greatly increase our number of readers, it would help wonderfully.

How many will send in at least *one new* subscription with their own renewals for 1906? Perhaps some can get several new readers for next year.

Miscellaneous News ✣ Items

Result of the National Election.—We have received the following from the chairman of the Board of Directors of the National Bee-Keepers' Association:

Lapeer, Mich., Dec. 4, 1905.

Friend York:—Below I give you result of the vote for the election of officers of the National Bee-Keepers' Association for the coming year:

Total vote for President 876. C. P. Dadant has 724, O. L. Hershiser 149; Surface, Hutchinson and Harris, 1 each.

Total vote for Vice-President 810. Geo. E. Hilton has 685, Dadant 91, Marks 8, Green 6, York 4, Hutchinson 4; Laws 2; Coley, Holekamp, Stachelhausen, A. C. Miller, Elwood, Rohrig, McIntyre, Chantry, Putnam and Crane, 1 vote each.

Total vote for Secretary 889. W. Z. Hutchinson has 763, Jas. A. Green 111, Geo. E. Hiltou 2; Laws, Stone and York, 1 vote each.

Total vote for General Manager 878. N. E. France has 852, Wm. Rorig 23, Frank Rauchfuss 2, and Hutchinson 1.

Total vote for Directors 2560. F. Wilcox has 491, C. A. Hatch 490, E. R. Root 466, E. W. Alexander 444, M. H. Mendelson 333, Walter S. Pouder 288, Geo. W. York 6, Dr. J. Rick 3; Laws, Kochen, Muth, Hutchinson, A. C. Miller, 2 each; and Dittmer, Crane, Hasty, Abbott, Brown, Green, Acklin, Putnam, Weber, Chantry, Coggshall, Hershiser, Moore, West, Voight, Selser, Lathrop, Fouch, Rorig, Surface, Wall, Holekamp, Holterman, McIntyre, Stone, Denman, Philips, Rauchfuss and Aikin, 1 each.

C. P. Dadant is elected President; Geo. E. Hilton, Vice-President; W. Z. Hutchinson, Secretary; N. E. France, General Manager; and F. Wilcox, C. A. Hatch and E. R. Root are Directors.

Yours,
R. L. Taylor,
Chairman Board of Directors.

Lightning Bug and Honey-Bee.—H. D. Talladay of Michigan, sends us the following, which is amusing, at least, and will serve to give variety if nothing else:

"But the queerest friendship of this sort that ever came to my knowledge was 'tween a lightnin' bug an' a honey-bee. The fust I noticed of it was one June afternoon, 'long to'rds dusk, when I see a black bug, 'bout half 'n inch long on one of my bee-hives, which, on lookin' closer, I found to be a lightnin' bug or firefly, as some folks calls 'em.

"Pretty soon a bee lit close by an' crawled to'rds the bug, as I thought to drive it off; for, you know, bees will pitch into an' kill any intruder that gits into their hives, even a strange bee. Wall, sir, the bee, instid of tryin' to drive it off, atcherly rubbed up against the bug, kinder caressin' like, an' fin'ally dropped a small drop o' honey, which the bug went to eatin', and when he's et all he wanted they both flew away together.

"Wall, of course, I was surprised, an' I was curious to

Directors-Elect of the National Bee-Keepers' Association

FRANKLIN WILCOX

C. A. HATCH

ERNEST R. ROOT

see what would happen next; an' in a little while back they both come, the bee goin' into the hive an' the bug lightin' on the outside. Bimeby the bee come out, an' off they went agin; an' when they come back this time it was dark, an' I'm dumbed if the lightnin' bug warn't on ahead an' lightin' the bee to the hive!

"Wall, they kep' this up for several nights; but I noticed that the bee was losing flesh, an' in about a week he was nothin' but skin an' bone. So much overtime was tellin' on him. One evenin' he fell to the ground exhausted, an' in a few minits he expired.

"The lightnin' bug took on awfully, an' crawled 'round and 'round his dead comrade an' acted almost frantic. He flew on to the hive an' jest sot there an' moped, refusin' to eat a mouthful, an' in a few days he follered his friend.

"I thought some at the time of tryin' to cross the two insects an' raise a bee that could work night an' day; but I didn't. An' I s'pose if anybody tried it now the unions would raise a rumpus, so I guess I won't bother."—New York Press.

Mr. Thos. J. Stanley, of the firm of Thos. C. Stanley & Son of Manzanola, Colo., called on us recently when in Chicago. The Stanleys are perhaps the largest handlers of comb honey in the United States. Through their management this season they undoubtedly saved Eastern bee-keepers a good deal of money, by buying up and holding much Western comb honey that might have been dumped on the honey centers like Chicago and cities further east, and thus cause a weakening of prices. Instead of that, however, honey prices have not only been sustained, but advanced a little over last year's prices. This should put things in good shape for the crop of 1906.

Mr. Stanley says that carloads of comb honey in the West average 30,000 pounds.

He also reported that Colorado's honey crop was practically a total failure this year. His firm runs about 2000 colonies in 5 or 6 apiaries, and not only got no honey, but had to feed for wintering. Surely it has been a very discouraging season for Colorado bee-keepers.

Contributed Special Articles

Difference in Honey Results of Colonies

BY G. M. DOOLITTLE.

A BEE-KEEPER called on me a few days ago, and in our conversation he brought out the idea that it was impossible to have the colonies in any apiary give anywhere near the same results in honey. He said that some of his colonies gave a surplus of only 10 pounds of section honey, while others produced from 50 to 75 sections, well filled. I told him that I thought this could be remedied to quite an extent, but he seemed to doubt it; and as I have many letters on this subject, perhaps it would be well to have a little talk on the matter through the columns of the American Bee Journal.

I used to find things very much as this man and others claim they do at this time, but of late years I have succeeded in making each colony produce nearly like results; that is, if one colony contains 60,000 bees and gives 100 sections of surplus honey, I am able to secure about that amount from every colony in the apiary having that number of bees; while a colony having 30,000 bees will give a yield of 50 sections. If I fail to secure the 60,000 bees in any and all colonies, it is not the bees that are to blame for this state of affairs, but myself; and the bee-keeper who cannot bring each colony up to the standard of 60,000 at the beginning of the best honey-flow, will not meet with as good success as will the one who can.

Then, the bee-keeper who fails to make the colony with 30,000 bees give nearly half as good results as the colony with 60,000, will not meet with the success that he might were he able to do this. I have been years studying on this matter, and this study has shown me that colonies which I pronounced "exactly alike" on June 1st would not be so at the time the honey harvest was at its best. The trouble was that I did not have the knowledge that I should have had regarding the working force of my bees at all times, nor of the amount of brood in each hive, which was to give this working force at the time of the honey harvest.

For instance, the colony which I called my best on June 1st might become one of the poorest by July 10th, at which time the main honey-flow from basswood would be on. This, as a rule, would come about by one queen not keeping up her laying capacity as well as another, or, in other words, she would not be laying her maximum number of eggs from 30 to 50 days before the arrival of this main honey-flow. Let me try to illustrate what I wish to bring out.

Near me lives a man who is interested in fancy poultry, and the demand for eggs from his stock comes in the spring, the eggs to be used for breeding purposes; and the prices which he gets at that time are almost fabulous. Being there a few days ago, he came from his chicken-house with two eggs from his spring pullets. I ventured the remark to him, the same as the ordinary barn-yard poultry keeper would do, "Quite lucky that your pullets have begun laying thus, right on the eve of the high winter prices for eggs, as eggs are worth about 3 cents each at the grocery now, and will be still higher before the holidays."

He gave me a glance which told me that he thought I did not know much about keeping fancy poultry (and he was right), and said, "I am using every effort at this time of the year, through feed, etc., to keep these pullets from laying now, for those which lay when eggs at the groceries are the highest are not apt to lay much in the spring, when I can sell my eggs at ten times as much, egg for egg, as I can during the winter months."

This set me to thinking regarding the bees, and reminded me that the queen which bred too prolifically "out of season" was not the one which gave the best results when the honey harvest was on.

I have often noticed that a colony which wintered extremely well, so that the queen goes to breeding very rapidly in the early spring, does not equal the one which comes out in an average condition, but commences brood-rearing in earnest about May 20th to 30th. The reason is that by June 10th the queen in the stronger one ceases to be as prolific as the other, or becomes like the man's hens do which are laying prolifically in mid-winter; they giving few eggs in the spring, just at the time when his eggs bring him the best price.

So the early strong colony spends all its best force at producing bees prematurely, bringing them on the stage of action too early to take advantage of the main honey harvest, while the queen ceases her prolificness just in time so that what workers there are store their first honey in the brood-combs, thus crowding the queen down to less and less room, with very little honey in the sections.

It has been noticed by very many, and many times, that if the bees are allowed to get the start of the queen so as to make any general storing of honey in the brood-chamber before entering the sections, during the first of the honey harvest, such a colony will not give the best results in section honey. And for these reasons I work as does my poultry-fancying neighbor, to discourage all extra-prolific brood-rearing, except at the time when such prolific breeding will bring the bees in just the right time for the main honey-flow, be that from white clover, basswood, or buckwheat, or all three.

Then when the harvest arrives, if I find colonies which do not have a hive more than half full of brood, dummies are put in to take the place of the combs containing no brood, and in this way I am enabled to make the colony containing only 30,000 bees produce nearly half as much section honey as does the one which has come up to the honey harvest in the desired condition.

The colony given to early breeding can in a measure be restrained by allowing it a scanty supply of stores, and contracting the room in the brood-chamber with dummies till the time comes for the rush of brood, when it will "rush to the rescue" when you wish it to do so by filling out the hive with combs having a liberal supply of honey in them.

Those given to late brood-rearing can be hurried along, when the right time comes, by giving a frame of brood from one which "has run a little too fast," together with stores sufficient to make them feel in a prosperous condition, thus bringing all up to the right point just at the right time, and when best to take advantage of the main honey-flow when it is on.

It is the attending to such items as these in bee-culture that gives the best success. Borodino, N. Y.

Black Bees—A Reply to Allen Latham

BY HARRY LATHROP.

MR. ALLEN LATHAM, on page 775, has given expression to thoughts that have doubtless occurred to many bee-keepers. I know I have often remarked at the persistency of the black race, and wondered if they would not have proven as profitable in a honey-gathering way as any other strain if the same care had been bestowed on them. I have had experience with them for over 20 years, generally having a few of them in one or the other of my yards. While occasionally a colony would do as well as any of the others, they never seemed to average as well. They were more often found with small brood-chambers, queens that were poor layers, and gave evidence many times of being what they really were—a run-out race.

Two years ago I purchased a whole apiary of black bees and brought them here. I ran them one season, and that was enough for me; I want no more black bees in my business. This season I sent to one breeder and procured breeders for queens, and to another for queens from which to rear drones. It is my ambition to rid this apiary of the last vestige of black blood next year.

As I said before, I have had some black bees right along, and tolerated them, but when it came to having a whole yard, after having worked for years with Italians, I simply could not endure them, and I think that were I compelled to breed only blacks or quit bee-keeping, it would be quit.

I do not object to them so much on account of their being cross; they are not so much crosser than the others, but in my practice I clip queens every spring. It is an easy matter to find and clip Italian queens, but a hopeless task to start in on a yard of blacks.

I favor the leather-colored Italians. They are good workers, queens are easily located; in fact, any and every manipulation is made with comfort and dispatch. I fully agree that by proper care the black race might be made equal to any for honey-gathering qualities, and we all like the way they cap their comb honey, but they are so disagreeable to work with that I think very few having had experience with them would wish to increase the stock.

There is another reason why black bees are undesirable: A cross between the black bee and the pure Italian results in a good worker, but the crossest bee on earth, unless it be the Cyprian.

I have had hybrid colonies that were better than any others for work, but such fighters that it became a serious matter to get their honey away from them.

I believe in enjoying life as you go along, if possible, therefore the black bees and their crosses should be ruled out, as they make life more or less miserable for those who must work with them. On the other hand, the Italian race of bees, with proper care, are good workers, prolific, beautiful, and kindly disposed. After a great many years of active work, during which time they have been on trial by nearly all the more prominent bee-keepers, they are deservedly the most popular race of bees to-day. Bridgeport, Wis., Nov. 14.

Honey Marketing and Publicity

BY JAMES WILCOCK

THE article appearing on page 743 is the best that I have seen; and please allow me to state that there is room for the sale of hundreds of tons of honey in this country; that is, honey of first-class quality, but the people here seem to have a great prejudice against American honey—they seem to think it is all adulterated. I have tried to persuade them that it is an impossibility to manufacture comb honey; in fact, you can scarcely sell comb honey, but of good extracted honey you can sell any amount. I have never had any difficulty in selling my honey. I put it up in 1-pound glass jars, and fix a label on them, and by putting on that label, if my honey was not pure, I should render myself liable under the Food and Drugs Act, to a fine of from $20 to $100.

I could sell now, right here in this country district, a ton of honey in glass jars before Christmas.

Now, Mr. Editor, will you allow me to give The Honey Producers' League a little advice? And if they will only take it, I have no hesitation in saying that all the ripe American honey of good flavor need not wait long for a good market.

As Mr. Green has said, establish your brands, or your trade-mark, and let there be a central place fixed for The Honey-Producers' League, say at Chicago, with branch places at Omaha, Kansas City, and St. Louis, and let all the honey that bears its trade-mark be thoroughly examined by experts appointed in those places to examine the honey, and all honey that is not ripe and of good flavor let it be excluded.

Advertise in all the leading papers in this country as to the purity of your honey, and let there be samples sent to all the leading stores in the United States and England, and you will soon find that your honey will not have to be glutted away the same as it has been in some of your markets.

Thanks to Mrs. A. L. Amos (page 763), for her letter seems to me to be pretty straight. Either Nebraska, Iowa, Missouri or Kansas, are the States I have selected to settle in, and I only want to know the best places for my object. I hope to be with you within the next 12 months.

Lancaster, England.

Canadian Beedom

Conducted by Morley Pettit, Villa Nova, Ont.

A Peculiar Fall in Ontario

This has been a peculiar fall in Ontario, and a hard one on bees. Since about the middle of October there has not been a good flying day except in the most southern parts of the Province. All signs seem to fail. The weather does everything but what well-ordered weather would be expected to do. One day bears every indication of approaching cold, rough weather; the next will be fine and bright, but not quite warm enough for bees to fly. These days are most trying. Uncomfortable from long confinement the bees grow restless—some fly out and are lost, and all consume more stores and fill up faster than they would in more steadily cold weather.

While putting bees into the cellar last week, we found in some yards they were spotting around some entrances, and covers were spotted considerably from their last flight. Of course, this can not be helped, but it will be a warning to give bees extra attention during the winter.

Four Days Putting Bees into Cellars

Four days of putting bees into cellars under private houses give plenty of varied experiences in that line. While at the Toronto convention, in November, I arranged with R. F. Holtermann to "change works," as the farmers say, and secured the assistance of J. H. McCauley, another enthusiastic bee-keeper. The following Monday (Nov. 20) we went at it. The first cellar, near Brantford, is stone with cement floor, all in one room. I had partitioned off with boards a room for the bees separate from the fruit and vegetables. The stairway is broad enough for two to walk right down with two hives on a hand-barrow. We three put the 112 hives in and blocked them up from the bottom-boards behind, in about 4 hours, although we had a long distance to carry them. The windows of this cellar will be banked with straw, and a 4 inch pipe run from near the pipe of the cook-stove in the room above.

Supper finished, we started out in the darkness to drive about 8 miles through *mud*. Ye city or sand dwellers have no idea what mud-roads are. All the way we were harassed by the thought that the next lot—18 hives—had to go through the cellar window! Next morning was bright, with indications of a flying day.

Cellar No. 2 is under a large brick house, and has three compartments—first, vegetables; second, furnace; third, bees. With no outside stairway there was no way out of it—through the window they must go.

We got another man, and with two outside to carry to the window, and two inside to pile up and block up, things went merrily.

To help matters, as the temperature rose slightly outside, a cool breeze from just the right direction kept the cellar cool. The bees came from an outside temperature just too cool for flying, into a cooler cellar air. This lowering of temperature was just the thing to keep the bees quiet, although even then they were lively enough before the cellar was full. That job was done in about 3 hours, and we voted the window *better than a stairway*.

Cellar No. 3, about 7 miles further on, had a regular maze of doors and passages through which the bees had to be carried. We could not use the window, as it was too small. It meant hard lug, lug, and stooping to preserve brains from joist all too low for such prominent Canadian bee-keepers!

However, we finished there in time to get a start at the next cellar, 3 miles further on, before noon Wednesday. By that time the bees were flying just a little, so we waited till 2 o'clock, then went at them. The weather was not ideal—too warm; but that is one of the disadvantages of managing several apiaries. Things must be done when the time comes, with much less regard to weather conditions than the small bee-keeper can observe. To make matters worse, the help we were counting on failed, and one man alone in the cellar found it pretty heavy work handling those 12-frame Langstroth hives with a rousing, strong colony of bees in each.

That night we drove 9 miles to a sleeping place, and 5 miles the next morning to the last cellar, almost in sight of Lake Erie. A drier cellar you never saw. It is in the buckwheat country, where there is sand clear to the bottom of things. Hives can sit flat on the ground, and when you pick them up the sand is dry underneath. The cellar-floor is perfectly dry sand.

By 4 o'clock Thursday we had finished the job. Next day it rained all forenoon and we were glad the bees were in. Six hundred colonies put into 5 cellars, and more than 40 miles of bad roads covered between Monday noon and Thursday, 4 p.m., we considered not bad work.

Hints for Beginners

In bee-keeping there is ever going on the great battle of the survival of the fittest. There is perhaps in no other branch of agriculture, to the same extent, the dropping out of some, and fresh members being drawn in, as there is in bee-keeping. There is still too common the impression that bees look after themselves, and too little is being done to check that impression. Until this is done there must be the constant change of bee-keepers and great loss to individuals and the community at large, and we are also bound to have inferior goods put upon the market to the injury of that market. Let me, however, say that the excellence of product is not gauged by the number of colonies a bee-keeper keeps.

Every bee-keeper is interested in the safe wintering of bees, for to-day we do not know where foul brood exists, and there is a particularly dangerous time in the spring. Colonies may have perished, which, unnoticed by their owner or any one else, are robbed out by strong colonies in the neighborhood. These hives may contain foul brood, and the honey robbed will be sure to be fed to the larvæ in the robbing colony, and the disease spread. We are then interested in our neighbor, and that neighbor may be a long distance from us.

I am not opposed to more bee-keepers, but I want them to realize before they enter into this branch of apiculture that it is a business, and should be pursued in business-like ways. It would, in my estimation, also be better to direct our attention more to reaching out to secure better markets, to educating the people to know the difference between good and inferior honey, and to educating all in the direction of producing a better and more uniform article. This undoubtedly can be done, as it undoubtedly has not been done in the past to any great extent.—R. F. Holtermann, in the Canadian Bee Journal.

Doctor Miller's Question-Box

Send questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Keeping Combs Until Next Season—Finding Queens and Reqeeening

1. I have had bad luck with my bees. The moths got in and killed 2 of the colonies. I don't think they would have gotten in if it had not been for the bees having paralysis. I have only one colony left, but I expect to get some Italian bees next spring. If I get a full colony the hive they come in would be all right. But what I want to know is, how can I fix the hives and frames that the bees died on so as to save them to put more bees in next summer. I have 3 hives with frames, and would like to fix them so they will do to put more bees in.

2. I sent for a queen the past summer. I took all the frames out of the hive, but I could not find the old queen, so I put the new queen in and they killed her. If I take an empty hive-body and place it with the entrance close up to the entrance of the hive I want to requeen, then put a queen-trap at the entrance of the empty body, cover the empty body half over, then take the frames and shake the bees into the empty body, would the plan work all right?

MISSOURI.

ANSWERS.—1. You will find it a difficult thing to keep the combs safe until swarming-time next year. Keep them out-doors where they will freeze, but closed up so that no mice can get into them. The freezing will kill all the larvæ of the bee-moth, and it is not likely that the moth will lay any more eggs in them till well along in the season next year. But you can make this a little more sure by taking them into a cellar when freezing weather is over.

2. If I understand correctly, your object is to find the old queen, and you propose to shake the bees into the empty body with a queen-trap at the entrance of this empty body, expecting the bees to pass out through the trap and crawl to the close-by entrance of the old hive, the queen being held in the empty body by the trap. Very likely it would work all right; but it might be just a little better to modify the plan a little. Fasten your trap at the entrance of the old hive. Lift out all the frames with adhering bees, and put them in an empty body close by. After all the frames are taken out of the hive, make sure that the queen is not in it, if necessary brushing all the remaining bees out of the hive upon the combs. Now lift one of the combs, shake and brush all the bees from it upon the ground in front of the old hive, and as soon as you have *all* the bees off the comb put the comb in the old hive. Proceed with all the combs in the same way, brushing all the bees in front of the trapped entrance, and putting the brushed combs into the old hive. The bees will crawl into the hive through the trap, and Madam Queen will be found trying to get in the same place.

Rearing Queens on an Island

In rearing queens, would it be to any advantage in order to get them purely mated, to keep them out on an island about a quarter mile from shore? MINNESOTA.

ANSWER.—Yes, it would make a difference, just how much difference depending upon the number of colonies on the main land, and perhaps some other things, such as the prevailing direction of the wind. I think a half mile of water would do a good deal more to isolate them than a half mile of land.

Effects of Inbreeding in Bees

Does the honey-bee degenerate through in-breeding? If so, what is the result?

1. Will they differ in color from Italians? If so, what color?
2. Are they larger or smaller?
3. What effect will it make in handling?
4. How will it affect in honey-producing?
5. How will it affect their swarming? CANADA.

ANSWERS.—Indiscriminate inbreeding among bees, as with all other animals, is likely to result in deterioration, the bad qualities becoming intensified. With intelligent control the result may be the other way.

1. Inbreeding ought not particularly to affect color. Blacks inbred would remain black, and yellow bees yellow, although there might be a slight tendency toward dullness in color.

2. Smaller, if anything; although you would probably not notice any difference in size after many years of inbreeding.

3. Any change in temper would likely be toward crossness, yet not certainly.

4. The chief effect would probably be most noticeable in this direction, the bees becoming less vigorous and active.

5. Any change in this direction would be likely toward more swarming.

Now, please understand that all these answers are more or less in the nature of guesses, and I shall be very thankful if any one better informed will "call me down" and straighten me out. There is also a possibility that some may have a misunderstanding of this whole matter. When inbreeding is under consideration, it should be understood as referring to breeding kept down within a pretty narrow circle. If you had a few colonies on your place for a term of years, and there were no other bees within 10 miles, you would have inbreeding. If others all about you kept bees, there would be little chance for inbreeding, and the outcome of your leaving your bees to themselves year after year would be different in different cases. If other bees about you were better than yours, yours would, at least for a time, be likely to improve, and *vice versa*. If you start with pure Italians in almost any location in this country, you are likely to find black blood working in from the bees around you.

Bee-Paralysis—Cellar-Wintering

1. Is there a remedy to prevent bee-paralysis in the spring?

2. Will camphor prevent it if I put a small piece in the hive?

3. Will paralysis affect bees that are wintered in the cellar as quickly as those wintered outdoors?

4. Do I have to remove the bottom-boards or the cover in the cellar? IOWA.

ANSWERS.—1. There have been a great many remedies, first and last, offered for the cure of bee-paralysis, but none of them has seemed to prove successful in different cases unless it be the sulphur cure, which you will find given in back numbers of this Journal. Some sprinkle the sulphur over the bees, after removing the brood, and some say they have succeeded by merely keeping plenty of sulphur at the entrance for the bees to crawl through.

2. It will probably have no effect whatever.

3. There is probably no difference.

4. That depends upon how much ventilation is afforded without the removal. My covers and bottom-boards are taken in with the hives, just as they were on the summer stands, but then there is a space 2 inches deep under the bottom-bars, and an entrance the full width of the hive 2 inches deep. Without any such provision for ventilation it is better to remove cover or bottom-board.

Mr. Hasty's Afterthoughts

OUR TOIL DOTH SWEETEN OTHERS

The "Old Reliable" as seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

EXTRACTING ALL THE WAX.

If I understand Arthur C. Miller, he thinks the principle of taking wax-material down under boiling water and giving it a lively handling right there is the winning principle if we are ever to get all the wax. More pressing can not, from the nature of the case, result in a solid cake of refuse with no remaining wax filling up interstices Quite likely he's right; and I'll take back the gravamen of what I said against page 583. Mr. Ernest Root (most competent of confessors) confesses, on page 777, that 5 percent of the wax is left in the pressed cake. Well, what say to a dasher-churn of stoneware with wire-screen cover, sized correctly to go right into the boiler—squatty of shape, and right to be covered an inch or more in the water, all except the dasher-handle? Begin the process much as usual in a tall wash-boiler. Boil, stir, dip out wax, etc. When not much more can be had on that line put the remaining slush in the churn. Sink it, and churn away vigorously for a long time. Nothing to hinder pressing it afterward to see whether any more will come out. Page 776.

COLOR OF BAIT-SECTIONS.

I hardly understand Wm. B. Lowe, page 780, whether the dark spot in his bait-sections was discolored comb, or whether the old honey was still there, more or less candied. If the former, is worthy of some study to find out what made the old honey discolor the comb. If the latter, I guess it's only just what might be expected. They are liable to leave it and put new honey around it. If you must needs put on honey in a bait-section, at least don't have more than two to a hive. Uncap it; be sure it is not candied much; and try hard to put it on when the bees are hungry. I once, when even greener than now, put on a lot of sections I had no market for—not as baits, but thinking the bees would keep it better than I could, and faintly hoping they would take it out and rejuvenate it. Queer looking stuff when I took it off the second time. Dingy, and fired full of empty cells here and there.

What About Boiling Sugar?

In Miss Wilson's answer, No. 4, page 778, we read, "Boiling does not change sugar." Say, rather, Boiling gently for a short time changes sugar but little. I think the chemists claim that boiling does greatly change sugar if you boil it long enough and furiously enough. Or did I dream that?

Orange Trees and Apple Trees.

Hello, orange tree! If you are a champion tree you are good evidence that the orange does not grow as big as the apple. Nobody would be surprised at an apple-tree of your size. (Outside of No. 46.)

The Government and Caucasian Queens.

That Government circular on the free distribution of Caucasian queens is admirable. At last Uncle Sam seems to be doing himself proud in helping apiculture.

Now, most of us don't want Caucasian bees. The bees we have are the bees we want. Scarce a glimmer of a chance that Caucasians will make more beautiful sections of honey than select Germans do, or store extracted honey swifter than select Italians, Carniolans or German-Italian hybrids. Many of us would like a few to tinker with and be interested in. But to all people keeping bees in cities and towns they are likely to prove a very great boon—if something near equal to those named above. Neighbors will be at peace if they are assured that a new kind of bee that pretty nearly *can't be made to sting* is the only bee kept. And a host of would-be amateurs can with Caucasians improve their minds and their health.

The grand trouble is that unsupervised breeders will send out hybrids largely; and hybrids are quite unlikely to be very gentle. Thanks—a thousand thanks—to Uncle Sam for undertaking to supervise. Let's all support him in a hearty and vigorous sort of way. Let's say, Don't buy a Caucasian queen unless the breeder has the Government indorsement. I would like to go further, and add this much more: Don't buy one unless bred entirely out of reach of any other bees. Pretty severe to limit prices to Italian prices plus 20 percent. I hope that on further consideration a minimum of $2.00 will be allowed, when bred in totally isolated localities. Or if allowed to send out queens just beginning to lay at tested-queen prices, that would be about as good. And the queens from such a location would be practically tested queens. Page 789.

Our Sister Bee-Keepers

Conducted by Emma M. Wilson, Marengo, Ill.

Bee-Keeping for Women in California

Under the above caption Mrs. J. B. Ames writes to the California Promotion Committee's publication as follows:

"Actual experience has proved bee-keeping to be a profitable as well as a healthful occupation for women in California. The ready market for comb and extracted honey removes all difficulties in disposing of the product of the busiest of all animals, and the mild climate permits the outdoor work necessary for the care of the bees during a long and pleasant season. The woman who would keep bees, either to supply her household needs or with a view of earning a living, has but to understand and apply the two following very simple essentials to the profitable keeping of bees. They are: first, that the animal life be properly nourished; and, second, that nature be so assisted by intelligent methods of keeping and reasonable care as to give best results to the keeper. But these essentials may be supplied here in California with a minimum expenditure of work and money. So many localities furnish abundant food for the bees that the question of feeding them is solved for the keeper, while by an intelligent selection of location and methods of handling the best results are easily obtained. There being no winter problem in California, it is not necessary to carry the bees with six months' supplies in the cellar. A bee-keeper in Wisconsin writes:

"'On April 12th I took out the last bees. From then till the 22d we had heavy frost and cold weather. On the 26th and 27th the weather is so unfavorable that one day they work and the next day they have to lay up again on account of high winds and cold.'

"We in California have but to read this from an Eastern beekeeper to appreciate the advantages of California's wonderful climate for bee-keeping. In fact, it has been the writer's experience that the bees not only stay on the same stands, but also gather nectar every month in the year, so that in the early spring they are in good condition to work and increase. All the work attendant upon the keeping of bees can thus be readily done by women, and the prevailing wholesale prices of 10 cents per pound for comb and 5 cents for extracted honey yield a handsome profit to the industrious bee-keeper.

"That there is room and that there are abundant opportunities for engaging in bee-keeping in California is shown by the present problem of disposing of the annual increase. And why should not women take up this industry since it is so pleasant and profitable an occupation for women? At present it is largely confined to farmers' wives and daughters, who already have many duties to perform, but the pleasant nature of the work bids fair to attract women who will be able to devote their attention and energies to developing the industry on a larger scale.

"It is a well-known fact that honey-bees will select a home in a hollow tree and there not only attend to all their natural wants and provide for an increase, but also lay up a surplus of honey. Climatic conditions in California are so favorable that it only remains for man to turn them to his benefit. Here there is no expense for feed, for the bees feed and care for the young, thus relieving the keeper of much care, so that there is no need to interfere with the increase except at the swarming season; then to provide new homes for the new swarms, where they can thrive and work and produce that delicious food, the value of which, I trust, will some day be fully realized by rich and poor alike.

"Although California's output of honey in 1905 will be the largest in many years, it will be quite insufficient to meet the extraordinary demand caused by the short crop in other States. One State usually leading in honey-production will produce hardly a fourth of a crop this year, while another is nearer to a honey failure than it has been for 20 years. Here is women's opportunity in California to enter this profitable business, which has always been to the writer a pleasant one."—Rural Californian.

The foregoing glowing recital of California's advantages will make some of the northern sisters green with envy. And yet any one who tries a season or more in California and the same length of time in a more northern locality is likely to find some advantages in the bleaker region, as, for instance, the matter of prices; and we will be generous enough not to envy, but to congratulate our sisters of the more sunny region.

There seems to be some sort of a slip in the statement that 1905 gives an unusually large yield in California, reports in general indicating just the opposite.

A Honey-Gargle

Pour a pint of boiling water on 25 to 30 leaves of common sage. Let the infusion stand for half an hour. Add vinegar sufficient to make it moderately acid and honey to taste. This combination of the astringent and emollient principles seldom fails to produce the desired effect. The infusion must be used as a gargle several times a day.—McCall's Magazine.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get them subscriptions, for which work we offer valuable premiums in nearly every number of this Journal. You can aid much by sending in the names and addresses when writing us on other matters.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Convention Proceedings

Report of the Texas Convention

BY LOUIS H. SCHOLL, SEC.

(Continued from page 847)

THE KIND OF HIVES FOR ALL KINDS OF HONEY.

Udo Toepperwein said that it depends largely upon locality as to which hive should be used. He would not begin to discuss this subject, because it would be impossible for him to finish it. He uses the regular 10-frame, dovetailed hive with the shallow Ideal 5¾-inch-depth supers, and that is the hive mostly sold by him. He said the greatest demand is for these shallow supers, and he believes from this that most of the bee-keepers are using this super now. This could be told from the orders that come in for them.

Mr. Atchley remarked that if shallow supers are used they should be used from the ground up, to prevent having different depths in a yard.

Mr. Pharr would use one kind of hive-body throughout, and if he should adopt one he would use the 5¾-inch super all the way through, 8 or 10-frame, according to the length of the honey-flow. If this lasts only a few days, he would use a small brood-chamber; if a long time, then he would use a large brood-chamber. But he thinks that the 5¾-inch depth is decidedly the best for producing all kinds of honey.

Mr. Aten would use the 5¾-inch if he were to use shallow supers, and would use them throughout so that all would be interchangeable.

Mr. White thinks that conclusions as to which super is most popular could be arrived at by the manufacturer or supply dealer, from the number of orders calling for them. Especially can this be depended upon when the orders come from experienced bee-keepers. He had been asked by many to make this size for them in orders sent to him. Many who began with others are changing to this type of super.

Before adjournment, Mr. Toepperwein said a few words in regard to the bee-keepers' exhibit at the International Fair at San Antonio, which begins Oct. 21, and closes Nov. 1. This year there are about $300 offered in premiums, and the bee-keepers are urgently requested to exhibit.

THIRD DAY—JULY 27TH.

The first number on the program was,

THE LATEST METHODS OF QUEEN-REARING.

Mr. Pharr exhibited his small frames and mating-boxes that he uses. The small combs on which the queens are mated are in frames of such size that 6 of them just fit inside of a regular Langstroth frame. In this they are kept to be built out in the hive ready for use. His small mating-boxes hold 1 such comb, and are painted different colors to prevent the returning queens from entering the wrong box. A virgin queen, 3 to 5 days old, is put in with about 50 to 100 bees in the warm summer, and with from 150 to 250 when the weather is cooler. No brood is needed in the small combs. If sealed brood is given it is not considered detrimental, but there is no benefit in having it at all.

Only one queen is mated with such a nucleus, when all are hauled home, the bees thrown together and made into a large nucleus. This is built up into a full colony. The small boxes receive new bees for the mating of the next queen. If more than one queen is mated with the same lot of bees, 50 per cent of the second lot of queens will be lost. It is cheaper to take new bees for each mating.

Mr. Bell asked, when the zinc queen-excluding slot is turned over the entrance after she is mated, to prevent the queen from absconding with the bees, do the bees ever abscond and leave the queen behind?

Mr. Pharr replied that they do not. Sometimes a queen is so small that she can pass through when they all leave. In this case the bee-keeper should be glad that she is gone, as such a queen is not fit to keep for any use whatever. Such small queens should be killed as soon as found.

Mr. Laws asked if 50 to 150 bees were enough, or if a teacupful of bees would be better.

Mr. Pharr said that it depends upon the weather, otherwise he could see no difference.

Mr. Bell—What percentage of queens are mated in a favorable season?

Mr. Pharr—From 75 to 90 per cent. During dry weather, with harsh winds, from 50 to 75 per cent. I prefer the small nuclei over the old-fashioned 3-frame nuclei.

Mr. Victor has not given the latest methods the time and attention that he should. He is an extensive shipper of bees and nuclei, and has loaded for shipment over 2,600 colonies and nuclei in the last 3 years. These went to Colorado and other places. The nucleus hive that suits him well is a 10-frame hive, partitioned off into 4 parts in such a way that one-quarter of the hive in each corner is occupied by a nucleus. The bottom-board has strips on it which are so arranged that the 4 parts of the hive are separate from each other. An entrance to each part is provided for at each opposite corner of the bottom-board. A large auger-hole covered with screen-wire part way up the hive, covered with a wooden button on the outside, is used to regulate the ventilation of the nucleus. This gives him good, permanent nuclei, and 75 per cent of the queens are mated throughout the season.

Mr. Laws dwelt for some length upon the method he practises, known as the "Baby Nucleus" plan. It is much like that described by Mr. Pharr, except that he uses somewhat larger combs and more bees in his mating-boxes, which he did not consider would make much difference. The greatest destruction to the colonies of bees in a queen-rearing apiary is caused by the making of the required nuclei. He prefers the little ones, as so many more can be made with the bees from one colony. New nuclei can be formed with each mating. With the old 3-frame nuclei it takes sometimes a week or even a month before the bees can be made to accept a new queen. This causes a loss of time and a loss of bees. The queen-breeder wants to leave his queen-rearing yard in as good shape at the end of the season as a honey-yard after the crop is harvested. He does not think it necessary to have brood in the mating-boxes, and cannot see why the Eastern and Northern bee-keepers should need it. A comb of honey works best with him. The difference between the old and the new plan is that from 200 to 300 queens can be mated at a time with the bees from one colony with the new plan, while 25 colonies are required for this number with the old one.

Last season he was very successful by using double wire-screens above a brood-chamber, over which he used another chamber which was partitioned off by solid boards into three nuclei. Auger-holes at opposite sides and at one end served as entrances to the different parts. A second screen and another body thus partitioned was used above, making, with the chamber below, 7 nuclei in all. A cell is given to each, and the queens are successfully mated. The same combs can be used again to mate a second lot, but it is better to start with a new lot of bees. The removal of the queen from the lower chamber is not necessary, as the queens are mated just the same above, there being no communication between the different parts. He thinks this the best plan for the honey-producer. When he unites all the bees from the different parts above he simply takes a new hive, places it on the stand from which the colony has been removed, and shakes all the bees in front of it. They are handled rather roughly, and smoked quite thoroughly. A queen is turned loose with them and allowed to enter the hives.

Mr. White remarked that the bees being cut off from those below by the double screen puts them in a queenless condition. It is conceded that any part of the bee-hive to which the queen cannot get is queenless, and they will start cells. Therefore, it is an easy matter to introduce cells to the nuclei made after Mr. Laws' plan.

Mr. Laws stated that the nuclei above did start cells when left alone; even when he drew out the screen, separating the bees before queen-cells would be started above. This would be done with a queen below, and sometimes a virgin from above would go below and kill the queen there, even a young and prolific one.

Mr. Pharr said that if a single wire-screen is used the bees from below tantalize the virgin queens above, and only 50 per cent of them are mated. With the double wire-screen there is no trouble.

Mr. Atchley experimented much with different methods of queen-rearing. He has lost much sleep over the matter. His whole aim was to arrive at a method by which more and better queens can be produced in all seasons. Most of the orders for queens are received when none can be mated successfully in the baby boxes. On this account he uses both the old and the new method. The baby nuclei worked all right during the honey-flow and swarming-time, but the larger 3-frame nuclei must be resorted to when the dearth sets in later. Both kinds are used throughout favorable seasons, so that one or the other can be depended on. If everything is favorable the queens are drawn from the baby nuclei and the others are left until last. The most essential thing with a queen-breeder is plenty of colonies, lots of bees and plenty of honey. Unless he has these he would better stop queen-rearing.

Matters Relative to the Farmers' Congress.

Upon the request of Prof. Connell the question was put before the bee-keepers' section of the Congress whether it should be retained at College Station for future meetings, or whether, on account of the inadequateness at the College to care for the delegates properly, the Congress meetings should be removed to another place. This was left for the discussion of the members, and that the delegates appointed should be instructed how to vote at the executive meeting of the Congress at the night session. After a lengthy discussion it was moved that the meetings be retained at College Station, and the delegates were instructed to vote to that effect.

Prof. Connell also called attention to the fact that each section of the Congress must elect an executive committeeman to meet with the Executive Board of the Congress at its meeting. Mr. W. H. Laws was elected.

The reports of the committees were then called for.

On Resolutions.

Resolved, That the thanks of this Association be extended to the railroad officials of Texas for courtesies shown the members in enabling them to attend the Farmers' Congress.

Resolved, That the thanks of the Association be extended to the Board of Managers of the A. & M. College for the use of the grounds and buildings.

Resolved, That we extend the thanks of the Association to the Galveston News, for the manner in which they have reported the proceedings of this meeting.

Willie Atchley,
C. A. Butts,
L. W. Bell, *Committee.*

On the Examination of the Experimental Apiary.

We, the committee chosen to inspect the experimental apiary at College Station, have given the apiary a thorough inspection, and heartily report same in excellent condition. The equipment is entirely adequate for apiarian management and educational purposes. The hives are of different construction and for that reason afford ample opportunity to investigate them so as to show the best to use in practical apiculture. We therefore recommend the management as practised by Prof. L. H. Scholl. If the students have been benefited as the apiary suggests, the State has been entirely justified in placing the apiary here for educational purposes.

W. O. Victor, Jas. W. Traylor,
T. P. Robinson, J. M. Hagood,
John W. Pharr, *Committee.*

On motion both reports were put to a vote and carried.

(Continued next week.)

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Report of the Chicago-Northwestern Bee-Keepers' Convention, held at Chicago, Ill., Nov. 30 and Dec. 1, 1904

(Continued from page 847.)

SAMPLES OF HONEY.

As a drawing card for the National convention that was held at St. Louis, Mr. France collected pound-samples of different varieties of honey from different States. After securing them it was impossible to display them, as outsiders kept slipping in and carrying them off. It was quite interesting to see how the same variety of honey differed in different parts of the country. Mr. France had with him, and placed upon exhibition, small samples of the varieties of honey that he had gathered.

"BRICK HONEY."

Mr. Root exhibited a sample of candied cut up as they cut it up into "bricks," and surround the packages with paraffined paper, with parchment paper over that. It can be sold only in a local market, as the public in general does not understand about the candying of honey, and, if kept over until warm weather, it will become too soft; in fact, only such honey as candies hard can be used.

Mr. France—Have you tried Southern honey?

Mr. Root—No, we have not.

Mr. Kimmey—How will it be next summer?

Mr. Root—It will be soft. As I have said, it must be sold while the weather is still cold. I would not advocate it for use away from home.

Mr. Duby—I have calls for candied honey here in Chicago.

Mr. Moore—There is no trade in candied honey here in Chicago, unless it has been worked up.

HOW SHALL WE BEST MARKET COMB HONEY?

Mr. Abbott—It depends upon the locality.

Mr. Becker—My plan is to put the honey up in an attractive package. I make three grades. There is a first and a second grade, and then the culls. Sell in the home market if possible. A home market is lasting, once it is established. Shipping honey without loss from breakage is an art. I have bought lots of honey from Mr. York, and never yet had a particle of loss from leakage in shipping.

Mr. Reynolds—An agent, or seller of honey, sometimes makes sales, and gets the start of some other seller, by showing that his honey is of light-weight—that is, the sections do not quite weigh a pound each, and there is more profit in their sale.

Mr. Becker—I have seen that done, but I always sell by weight.

Mr. Moore—I found, in Indiana, merchants who were selling 2,000 or 3,000 pounds of honey each year. I found that they did it by keeping it in sight—put up in nice showcases. Sell honey close at home, then it will not be smashed.

Mr. Duby—I have sold as much as 1,000 pounds of honey at a fair, and I find it an excellent place to advertise.

Mr. Meredith—At Mill Park, where there were excursions from schools, I have sold as much as 400 pounds of honey in one day.

Mr. Wilcox—First decide at what price honey will sell. Put it up in the best style. Sell it near home. If not possible, then put it in the hands of commission men.

Next came an address by Prof. E. N. Eaton, State Analyst of the Illinois Food Commission, on

FOOD FRAUDS AND FOOD OFFICIALS.

Again I have the privilege and the honor—and I assure you it is a privilege and an honor—of appearing before the Chicago-Northwestern Bee-Keepers' Association. I believe I feel as much interest in your Association, its members and its meetings, as I would had I as large an apiary as Mrs. Stow, or as much knowledge of the bee as Dr. Miller, instead of no knowledge of the ways of the bee except as a warrior, and no earthly possessions in that line—not even a bee in my bonnet. Last October I read before the National Association a paper on "Food Frauds," laying special stress on the misrepresentation of comb honey, and the damage such misrepresentation has done to the sale of that commodity.

Mr. York has suggested that I bring the same subject before this Association, inasmuch as there are many in attendance at this convention who were unable to get to the National, and the records of that convention will not be available for some time.

Many years ago Dr. Wiley, now chief chemist of the United States Department of Agriculture, stated that comb honey was being made artificially, comb and all. That story went the rounds of the press, and, despite frequent denials, appears in papers to this day, even in such reliable publications as the Ladies' Home Journal, the Chicago Tribune, and the Philadelphia Press. When cornered Dr. Wiley claimed that the statement was "a scientific pleasantry," and that the bee-keepers—simple children of Nature—were too obtuse to see the joke. The public and the public press, however, took it as seriously as did the bee-keepers, and consequently Dr. Wiley's reputation as a joker suffered a serious relapse.

There have been many variations of "the Wiley lie," as the statement has been referred to by bee-keepers. State Food Commissions have said that bees entered the conspiracy, and were fed glucose to produce honey. Other Food Commissions contented themselves with repeating the original lie without variation. But all had the same effect—to prejudice the public against the purchase of pure comb honey, and, to a certain extent, of honey of all kinds. I need not tell an association of bee-keepers that such stories are made out of whole cloth. They are in fact lies—however, not malicious lies, as I doubt not they largely come through ignorance. As to the remedy I would infringe on the copyright of President Roosevelt, and suggest *publicity*. Every food commissioner and chemist should do his part to correct the false impression which has been made, and I assure you in behalf of Commissioner Jones and myself, that we will do our part.

Another matter in which the bee-keepers have of late evinced much interest, is the chemical composition of honey. Owing to the fact that the word "glucose" has two or three meanings chemically, and an entirely different meaning commercially, there has been much confusion among bee-keepers, as to whether or not glucose is a normal constituent of honey.

In taking up this matter I wish to call your attention to a pamphlet just received, defining honey and setting standards for the same. The pamphlet is a part of a report from a committee of standards of the Association of Official Agricultural Chemists, and as their standards have been recognized by the United States Secretary of Agriculture, they become important and authoritative. The standard and definition of honey are as follows:

"1. *Honey* is the nectar and saccharine exudations of plants gathered, modified, and stored in the comb by honey-bees (*Apis mellifica*). It is lævo-rotatory, contains not more than twenty-five (25) percent of water, not more than twenty-five hundredths (0.25) percent of ash, and not more than eight (8) percent of sucrose.

"2. *Comb honey* is honey contained in the cells of comb.

"3. *Extracted honey* is honey which has been separated from the uncrushed comb by centrifugal force or gravity.

"4. *Strained honey* is honey removed from the crushed comb by straining or other means."

My quarrel with these standards is in the definition for honey, which I maintain is too sweeping, and incorrect.

Strictly speaking, honey—commercial honey—should be limited to the nectar of flowers. Louse honey, or honey-dew honey, or pine-tree honey, are not, and should not be, sold to consumers for honey. Again, honey is not nectar nor saccharine, but a manufactured product, made by the bees, changed from its original condition.

There is, of course, such a thing as honey from bumble-bees and no doubt other bees, but the only honey of commerce is produced by the honey-bee, and to this bee the definition properly should be restricted. I would therefore suggest that the definition for honey be that suggested by me to the National Association of State Food Commissions, which is this:

Commercial honey is the nectar of flowers, transformed, and stored in a comb by the honey-bee.

As these schedules are subject to revision, it might be wise, if the Association looks at this matter in the light that I do, to take some action, preferably by resolution.

A word as to the condition of the Illinois honey markets in regard to purity, and I am done: Before the Illinois Food law became operative fully 33 1-3 percent of the extracted honey on the market was adulterated. Since then the adulteration has grown less, until last year, when we found seven samples of adulterated extracted honey out of 28 samples analyzed. However, in all but one case, the adulterant was cane-sugar, and in several cases it was impossible to tell whether it had been intentionally added or fed to bees. This year, while only a few samples were analyzed, none have been found adulterated. It seems that adulteration of honey with glucose is almost a thing of the past.

E. N. Eaton.

Mr. Moore—Isn't the change of cane-sugar to grape-sugar the same as that made by the bees?

Prof. Eaton—I think not.

Mr. Kimmey—Can chemical science make honey?

Prof. Eaton—No.

Mr. McCain—I supposed that the nectar was changed to honey while in the sac of the bee. Isn't that true?

Prof. Eaton—I am inclined to think that the change is begun in the sac.

Mr. Abbott—This question of nectar and honey has been threshed over again and again. When the nectar is put into a cell I think it is still nectar. I don't agree with Prof. Cook, that honey is partly-digested nectar. Cane-sugar stored in the combs is still cane-sugar, and will remain such, Prof. Cook to the contrary notwithstanding, and I want Prof. Cook to know that I say this. I would like to know if Prof. Eaton agrees with Prof. Cook.

Prof. Eaton—I must admit that I got most of my information on this subject from Prof. Cook, and I am inclined to agree with him.

Mr. Kimmey—If I feed the bees 20 pounds of honey or sugar, and then find only 14 pounds in the combs, let me ask where the difference has gone to?

Mr. Moore—It has been used up in household economy. Prof. Cook has said that if we feed sugar to the bees, honey will be the result. If this is true, then what kind of honey is it?

Mr. Wheeler—The matter of honey-dew is important. If there was any honey-dew in our honey we might be accused of adulterating our honey.

Mr. Root—Mr. Selser and Prof. Eaton agree exactly as to the proper definition for honey, but this point raised by Mr. Wheeler is really most important. Suppose I am a beginner, and I unknowingly put honey-dew upon the market, there is danger of prosecution, in which injustice will be done.

Prof. Eaton—I might say that I do not agree with Prof. Cook in every point. One point is that I do not believe that when bees are fed cane-sugar the result is true honey. It would be lacking in the natural flavor of true honey. In regard to the best definition for honey I think that practical bee-keepers are the best judges as to what this definition should be. The matter is really important, however, as decisions in important suits may turn upon the definition that the courts are guided by.

It was moved by Mr. Moore that the chair appoint a committee of three to look after this matter of securing a proper definition for honey. Dr. Miller, C. P. Dadant and E. T. Abbott were appointed.

Upon motion of Mr. Horstmann it was voted the Association pay the Secretary $20 for his services.

DEFINITION AND STANDARD FOR HONEY.

In reply to a question, Prof. Eaton said that he considered 25 percent of water in honey was a high percentage for a standard. About 22 percent is as much water as was ever found, but he thought it better to be safe, and put it at 25 percent. Eight percent sucrose is also a high percentage. He had no objections to offer to the standard as proposed for honey.

Mr. France—I suppose that these standards will become authority. If they do, and the proposed definition is also made authentic, then I am ready to quit bee-keeping. My honey this year would be pronounced adulterated if judged by the proposed definition.

Upon motion of Mr. Moore, a vote of thanks was given Prof. Eaton for his paper. Thanks were also tendered the proprietor of the Revere house for his courtesy and kindness in furnishing a room for the meeting. Mr. Root was also remembered with a vote of thanks for his entertainment with the stereopticon.

The convention then adjourned to meet at the call of the Executive Committee.

Honey as a Health-Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food", written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey". It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey the more honey they will buy.

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Reports and Experiences

Pure Food Law for Iowa

To day I had a conversation with Hon. E. J. Sankey, Decatur County's representative in the Iowa State Legislature, on the subject of a pure food law. Iowa has no pure food law, but Mr. Sankey read to me the provisions of a Bill which was introduced at the last meeting of the Legislature. He thinks it will be passed at the coming session, either in its present or in an amended form. The Bill as it now stands provides that the Dairy Commissioner shall perform the duties of Food Commissioner. Mr. Sankey thinks another man should be named for the last-named work. I think he is right.

In the absence of a pure food law, Iowa is made the dumping ground for the adulterated products of all kinds, wherever made. I will venture to ask the honey-producers of Iowa to labor with their representatives for the enactment of a pure food law at the coming session of Iowa's Legislature.

Leon, Iowa, Nov. 24. EDWIN BEVINS.

Very Light Honey Crop

The honey crop in this part of the State (Jefferson Co.) was very light this year. I keep most of my bees in Vernon County, and the crop there was a total failure. I had to feed 600 pounds to keep my bees through the winter. There were two causes for that failure: 1st, very cold and wet weather during the white clover bloom; 2d, an hitherto unknown bug killed all the basswood blossoms. Every cluster had at its base some white scum the size of a pea, and in the middle of it was a white bug with a yellow stripe on each side. The buds began to wilt when about half developed. Does any one know any thing about that bug? To give an idea of the damage done, I may say that I know some of the bee-keepers who a year ago secured over 150,000 pounds of honey, this fall had to feed their bees for winter. GUSTAVE GROSS.

Lake Mills, Wis , Nov. 16.

Handling Bees—Bottom-Boards

I would not like to be without the "Old Reliable." I am always glad when Friday comes, because I get the Journal regularly on that day. I do not think it has missed since I have been taking it.

This is my second year with bees; I have no trouble in introducing queens. I mate them in the miniature hive, or baby nuclei, as it is called. I had one mated, and when I found her laying I don't think there were more than 2 dozen bees with her, and she is a fine queen.

Our bees swarm from the first of April until June. I had one swarm to come out July 21. I hived it on empty combs, and now they have their hive full of honey.

The season here was too wet and cool in the spring and summer. All the honey I got was stored in September. My best colony stored 60 pounds of comb honey, which I sold at 20 cents per pound—$12.00. My next best colony was a prime swarm, which gave 53 pounds.

I like bees, and would rather work with them than to eat when I am hungry. I see a great deal said about handling bees. Some ask how to smoke them, and how much to smoke. I smoke them until I subdue them, if they are cross, much or little smoke. A. I. Root said one time he had some bees to run him. I never ran yet, and I am no expert at handling bees, but when I want to handle them, I handle them. Just the same, I generally have on a veil, and most of the time with only my undershirt and overalls on, and sleeves rolled up. If one gets its business-end into me, I simply rub out the sting and go on. Run! oh, no, I think I would be a coward to let as little a thing as a bee run me. I am not afraid of them in the least, and I can't see why one should be, for they are as harmless as a dove.

Bees are flying to-day—temperature 72 degrees. How is that for winter? Bees can fly here every month of the year. I winter them on the summer stands in single-walled hives. Bees are in good shape for winter, with plenty of sealed stores.

I make my own hives, and buy frames and sections. I see a great deal about hive-making. I can make them a great deal more cheaply than I can buy them, and they answer all purposes. If they do, why are they not just as good as a factory-made hive? I make a bottom-board which, to my notion, is ahead of anything I have seen. Mr. Root says it won't do, but I say it will do. It is thus: I take two pieces 20 inches long by 1x4 wide; one piece 12 inches long, 1x4 wide; one piece 12 inches long, 1x2 wide; one piece 1x12x4 feet long; this board goes between the two side rails within 3/8 inch of the rail in the rear. You can have the board 1 1/2 inches in front to close up. Two nails are driven through the side-rails in the rear to hold the bottom in place. This gives an incline to the front of the hive for all debris to go out with a rush If this is not all right I can't see why it is not

I would like to hear from some one on the bottom-board question. Since writing to Mr. Root about it last year, some one has patented a board the same as mine, only he leaves the bottom loose, so he can pull it out, and Mr. Root recommends it, if I mistake not. If I am wrong, I beg pardon.

Dr. Miller and Mr. Doolittle, what do you say about the bottom-board business?

W. C. EDGEWORTH.

Little Rock, Ark., Nov. 6.

Geranium or Crane's-bill

A weed or bush of some kind came up under the edge of the porch on the south side of the house, in August, and is just now in full bloom. The stalk branches out and has a bunch of flowers at the end of each branch. Each blossom contains a drop of nectar the size of a BB shot, but it is rather cool now

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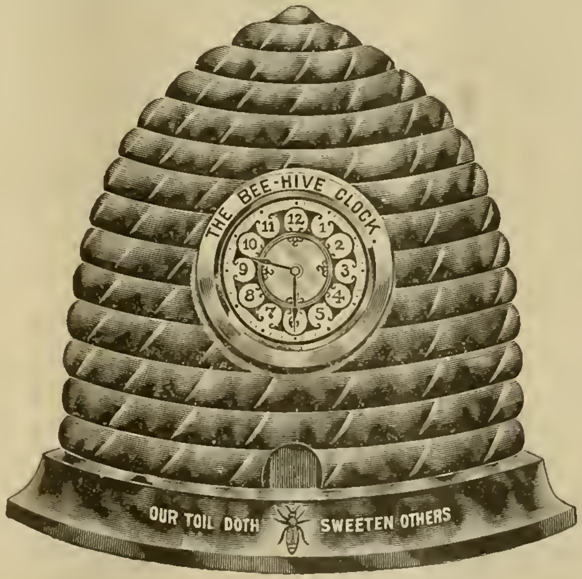
THE BEE-HIVE CLOCK
OUR TOIL DOTH SWEETEN OTHERS

THE BEE-HIVE CLOCK

Only $2.50, f.o.b. Chicago, by express. Weight, with packing, about 4 lbs. Ready for delivery Dec. 15.

We have had made specially for our readers, a bronze-metal Clock, called "**The Bee-Hive Clock.**" It is about 8 inches wide at the base, about 10 inches high, and deep enough at the base to stand firmly on a mantel or elsewhere. It is a beautiful piece of work, and would be both ornamental and very useful in any house, and particularly in a bee-keeper's home.

The clock part itself is warranted for 3 years to keep good time. So it is no plaything, but a beautiful and needful article for everybody.

Clocks like "The Bee-Hive Clock" usually sell in the stores at from $4.00 to $5.00 each, but having them made for us in large quantities enables us to offer them at $2.50 each by express, or with the Weekly American Bee Journal a year—both for only $3.00. Either Clock or Journal would make an ideal gift.

We expect to begin filling orders by Dec. 15, 1905, so the Clocks will arrive at destinations in time for Christmas, if so desired. Here is something that surely is appropriate for bee-keepers—"The Bee-Hive Clock." Better get your order in quick—first come first served out of the first lot of Clocks.

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Remember, we expect to begin to fill Clock orders Dec. 15, so as to have them reach those who order in good time for Christmas.

and the bees do not bother it. I enclose one of the flowers, and would like to know its name. The bush has thorns resembling those of a blackberry briar. H. P. GANNAWAY.

Ft. Smith, Ark., Nov. 4.

[The flower belongs to the geranium or crane's-bill family, and has undergone some changes so that I can not identify the species. It is a flower that has no doubt escaped from cultivation.—C. L. WALTON.]

Poor Honey Crop

The honey crop is very poor this year. The bees have not stored enough honey for themselves since the middle of July. Large winter losses are expected here.

HARRISON BLEVINS.

Cowgill, Mo., Nov. 16.

Caucasian Queens

The gentlest bees known. Send in your orders early; $1.00 to $5.00. Texas Queens in February; all good honey-gatherers. Rotten wood, 75c a barrel. Address,

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Very Low Excursion Rates for Christmas Holidays

to all points on the Nickel Plate Road between Chicago and Buffalo. Dates of sale Dec. 23, 24, 25, 30 and 31, 1905; and Jan. 1, 1906, with limit returning Jan. 3, 1906. Rate one and a third fare for the round-trip. Individual Club Meals ranging in price from 35 cents to $1.00, and Mid-Day Luncheon 50 cents, served in Nickel Plate dining cars; also service a la carte. No excess fare. Chicago city ticket offices, 111 Adams St. and Auditorium Annex. Depot, La Salle and Van Buren Sts. The only depot in Chicago on the Elevated Loop. 40—49A3t

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Every issue is handsomely illustrated and from 32 to 64 pages a month are filled with interesting matter pertaining to fruit-growing and gardening. The first four issues of 1906 will be handsome special numbers devoted to the following subjects: January, The Horticultural Societies; February, Spraying; March, Gardening; April, Small Fruits. Any one of these numbers will be worth a dollar to you. We publish the "Brother Jonathan Series" of fruit books. Send your name and learn how to secure these books free.

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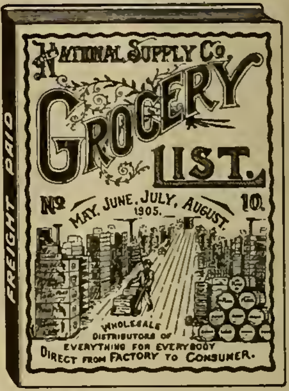
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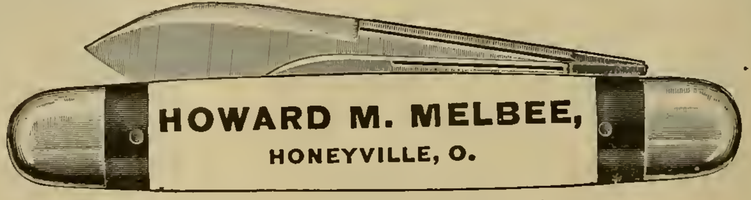
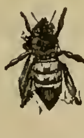


(This cut is the full size of the Knife.)

NOVELTY POCKET-KNIFE

(Name and Address on one side—Three Bees on the other side.)

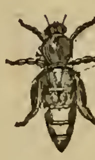


Worker

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the owner, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. It will last a life-time, with proper usage.



Queen

Why Own the Novelty Knife?—In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and, in case of death, your relatives will at once be notified of the accident.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or club the Novelty Knife and the American Bee Journal for one year—both for $2.00. (Allow two weeks for Knife order to be filled.)

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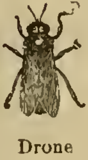

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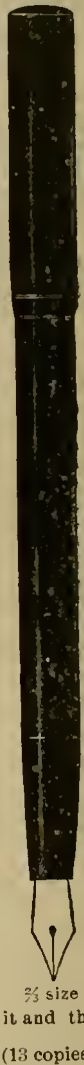
Finally, we have found a good Fountain Pen that is reasonable in price. The manufacturers of this pen say that if you pay more than $1.25 for other fountain pens, it's for the name.

This pen is absolutely guaranteed to work perfectly, and give satisfaction. The Gold Nibs are 14 kt., pointed with selected Iridium. The Holders are Para Rubber, handsomely finished. The simple feeder gives a uniform flow of ink. Each pen is packed in a neat box, with directions and Filler.



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☞ Sample copy of the American Bee Journal free; trial trip of three months (13 copies) for 20c; regular yearly price, $1.00. Address all orders to

GEORGE W. YORK & CO., 334 Dearborn St., Chicago, Ill.

CONVENTION NOTICES.

National Convention, Dec. 19, 20, 21.—The Fat Stock Show, upon which we have depended for reduced rates on the railroads, has been postponed two weeks, so the dates for the convention will now be Dec. 19, 20 and 21, 1905.

The place of meeting has also been changed to Brunt Hall, in the Bush Temple of Music, corner of North Clark Street and Chicago Avenue (entrance on Clark Street,) 5 minutes walk north from the Revere House, Southeast corner N. Clark and Michigan Sts., which will be headquarters for the members.

W. Z. HUTCHINSON, *Sec.*

The Chicago-Northwestern Bee-Keepers' Association will hold a social session at the Revere House, Dec. 19, 1905, at 10 a.m. At 2 p.m. the same day will be held the regular annual election of officers. Any other business coming before the meeting will be attended to. HERMAN F. MOORE, Sec.

New York Bee-Keepers' Institutes.—A series have been arranged to be held in New York State as follows: Amsterdam, Dec. 11, 1905; Syracuse, Dec. 12; Watertown, Dec. 13; Fulton, Dec. 14; Auburn, Dec. 15; Romulus, Dec. 16; Geneva, Dec. 18 and 19. Dr. E.F. Phillips, Acting in Charge of Apiculture, United States Department of Agriculture, will attend and address these Institutes on subjects pertaining to bee-keeping.

Romulus, N. Y. C. B. HOWARD, Sec.

The New York State Association of Bee-Keepers' Societies will hold its annual meeting at Geneva, N.Y., at the Nester Hotel, Monday and Tuesday, Dec. 18 and 19, 1905. New and interesting subjects are to be introduced and discussed at this meeting, and all bee-keepers of New York State should make arrangements to be present. Good and reasonable accommodations have been secured. Headquarters will be at the Nester Hotel.

Romulus, N. Y. C. B. HOWARD, Sec.

The 10th Annual Chicago Show of the National Fanciers' and Breeders' Association will be held Jan. 22 and 27 (both inclusive) 1906. The most prominent of the breeders and fanciers of poultry, pigeons, cats and pet stock of all kinds have already signified their intention of being in attendance with an entry of their finest specimens. The best incubators and brooders of the country will be shown in operation. Foods and supplies and appliances pertaining to the great industry which this enterprise represents, will compete for the favorable attention of the crowds. Premium lists with classifications, rules, list of judges and apportionment of same, and all necessary information to exhibitors and patrons, will be issued about Dec. 15, 1905. The mailing list includes 20,000 names, and it is the purpose to send to all interested, yet some may by mistake be missed. All such and those deserving specific information should write to Fred L. Kimmey, Sec., Room 500, 325 Dearborn St., Chicago, Ill.

Smokers at Wholesale

for a short time only. Hives, Sections, Foundation, and all Bee-Supplies at bottom prices. Circular free. If you rear Queens for sale mention the fact when writing.

49A3t ARTHUR RATTRAY, Almont, Mich.

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The Emerson Binder

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 75 cents; or we will send it with the Bee Journal for one year—both for only $1.50. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

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Sent on receipt of price per mail.
T. F. BINGHAM Farwell, Mich.

OTISVILLE, PA., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. FRED FODNER.

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Best quality. Good bearers. Low prices. Apple 4c; Plum and Cherry 12c; Peach 4c; all budded; Concord Grapes 2c; Forest Tree Seedlings $1 a 1000 up.

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Our large, 52 to 112 page magazine, beautifully illustrated best printed and edited poultry journal, makes it easy to add $$ to your income by keeping a few hens on a town lot, or make a success on a large scale; covers everything. POULTRY SUCCESS, one year, 50c; large illustrated poultry book free to annual subscribers. 3 months trial, 10c. POULTRY SUCCESS CO. Dept. 17, Springfield, Ohio.

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Christmas Holiday Excursion Rates

via the Nickel Plate Road between Chicago and Buffalo. Dates of sale Dec. 23, 24, 25, 30 and 31, 1905, and Jan. 1, 1906, at a fare and a third for the round-trip, with return limit of Jan. 3, 1906. Through train service to New York City, Boston, and other Eastern points. No excess fare. Individual Club Meals served in Nickel Plate dining cars. Three through trains daily from La Salle and Van Buren St. Station. The only depot in Chicago on the Elevated Loop. 39—49A3t

Glass Jars for Honey

We can ship by return freight at the following prices:

½-lb. Tip-Top Jars—case of 24 doz., $8.00; 3 cases, $23.00.

¾-lb. Tiptop Jars—1 case of 14 doz., for $5 25; 3 cases for $15.

1-lb. Tiptop Jars—1 case of 12 doz., for $5; 3 cases for $14.

Second Hand... Comb Foundation Mill

We have for sale a 6-inch Second-Hand Comb Foundation Mill. Used scarcely any; good as new. If interested write for price.

50 boxes good 2nd-hand 5-gal. Tin Cans, 2 in a box—10 boxes for $4 00.

When sending for sample jars include 15 cents each to cover postage, etc.

YORK HONEY AND BEE SUPPLY CO.
(Not incorporated)
141 Ontario Street, - CHICAGO, ILL.

85c for 15 NAMES For names and P. O. of 15 farmers and 15c—stamps taken—we will send for 2 yrs. the Farmer's Call—reg. sub. price 50c a year. F. C. is a wkly., 25 yrs. old, 1,300 pages a yr. Sample free. Farmer's Call, Quincy, Ill.

THIS PRIDE KING HEATING STOVE $3.90

FREIGHT PAID

This is positively the lowest price ever made for a genuine Oak Heater, fully guaranteed or money back. PRIDE KING has a draw center grate, corrugated cast iron fire pot, sheet steel body, heavy cast base and heavy cast front with large front door hung on double hinges, heavy cast swing top, heavy cast ring at joining of body and fire pot, large cast ash pit door, two screw draft regulators, and is the only stove of its kind supplied with an ash pan. The $3.90 price is for stove with wood grate; coal grate 10 cents additional, making a powerful heater that will burn wood, hard or soft coal. A beautiful stove, full nickel trimmed, as shown in cut. Write for it today—it's the best stove bargain of the season.

Ask us how you can save $150 to $250 a year on your household supplies. Others are doing it, why not you? The plan is simple—you get 10 per cent discount on everything you buy. Write today for information.

Our 1,000-page FREE merchandise catalog has hundreds of stove snaps you can't find anywhere else. Write for it NOW; it will save you money every day.
Co-Operative Society of the National Supply Co., Lansing, Mich., Chicago

Farm and Stock is an illustrated monthly magazine in the interest of CORN BREEDING, Cultivation and Live Stock. Price $1 a year, but for a short time will be sent a year on trial for 10c and names of ten farmers who grow corn.
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The No. 25 Honey-Jar, Porcelain Cover, Metal Screw Cap, absolutely tight, holding One Pound of Honey, Net, in shipping-cases of one gross each:

1 gross lots............	$4 50 per gross
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Also in strong RE-SHIPPING CASES of two dozen each, heavy corrugated partitions, sides, top and bottom—a perfect protection—

1 case lots	$1.00 per case
5 "	.95 "
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Eight-ounce Tumblers, tin caps, 3 dozen in re-shipping case:

5 case lots, per case, 3 doz........	85c
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F.O.B. New York. Prompt shipment on receipt of order.

HILDRETH & SEGELKEN,
265 & 267 GREENWICH ST., NEW YORK, N. Y.
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For Sale—25,000 Lbs. of well-ripened Spanish-needle Extracted Honey put up in new 60-lb. tin cans—6c a pound for the lot, or 6½c for less, F. J. GUNZEL, Weiner, Ark.
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Until further notice, finest quality new crop California Water-White White Sage and Light Amber HONEY in 60-lb. tins, 2 in a case; new cans and new cases Write for prices and samples, and state quantity you want.

HILDRETH & SEGELKEN
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WANTED

Fancy White Comb Honey in Non-Drip Shipping-Cases; also White Clover Honey in cans and barrels. Please send samples and state your lowest price, delivered here. We pay spot cash upon receipt of goods.

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Big Discounts on Bee-Supplies

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For cash orders before Oct. 1—10 percent

Nov. 1......	9 percent	Feb. 1	6 percent
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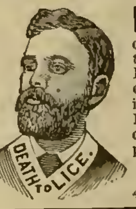
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LOSS BY LICE

on poultry amounts to many times the cost of **Lambert's Death to Lice**—the sure preventive. Loss can be saved and profit made by its use. Frees sitting hens from lice without harming eggs or chicks. A trial 10c box will prove it. 100 oz., by express, $1.00.

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IN 60-POUND CANS

We have a good supply of **Pure Alfalfa HONEY** in 60-pound cans that we can ship by return freight at these prices: 2 cans, boxed, at 8½ cents a pound; 4 or more cans at one time, 8 cents a pound—all f.o.b. Chicago. Cash with order. Sample, by mail, 8 in stamps, to cover package and postage.
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YORK HONEY AND BEE SUPPLY CO.
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Lowest Prices

Big Discount for Early Orders

On Cash Orders

Before November 1................9 percent
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" January 1................7 "
" February 1................6 "
" March 1................4 "
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We have published THE AMERICAN BEE-KEEPER for 15 years (monthly, 50c a year.) The largest and best illustrated magazine of its kind for the price published. Edited by two of the most experienced bee-keepers in America.

Sample copy free.

Our large, illustrated Price-List of Supplies free on application. Address,

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JAMESTOWN, N. Y.

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Complete stock for 1905 now on hand.
Freight rates from Cincinnati are the lowest,
ESPECIALLY FOR THE SOUTH, AS ALL FREIGHT NOW GOES THROUGH CINCINNATI.

7 Percent Discount

For Cash Orders Received in

DECEMBER

This applies to all goods with exception of Shipping-Cases and other Honey-Packages for current use.

C. H. W. WEBER CINCINNATI ...OHIO...
Office and Salesrooms, 2146-48 Central Ave. Warehouses. Freeman and Central Aves.

Honey and Beeswax

CHICAGO, Dec. 6.—The trade in best grades of white comb honey has been fair, yet retailers taking only small quantities at a time. This honey brings 14@15c; other grades are difficult to place at from 1@3c per pound less. Extracted selling at 7@7½c per pound for white; amber 6½@7c; dark 5½@6c. Beeswax, when clean and of good color, 30c. R. A. BURNETT & CO.

CINCINNATI, Nov. 24.—The demand for comb honey is relaxing to some extent, owing to the majority of the trade being well supplied. All fears of a comb honey famine have been allayed. We quote fancy white comb honey at 14@16c. Extracted honey is in fair demand. Quote amber at 5¼@6½c, according to the package and quality. Fancy white and white clover extracted at 6½@8½c. We are paying 28½c per pound delivered here for choice yellow beeswax.

(We wish to call the attention of the producer to the above honey quotations, who mistakably expects to receive these prices for his product. The above are our selling prices.) THE FRED W. MUTH CO.

TOLEDO, Oct. 17—The honey market remains firm, with good demand, and prices the same as last quotations. Fancy white comb brings 15c; No. 1, 14c; fancy amber, 13c; buckwheat, 13c. Extracted, white clover, in barrels, 6¼@6½c; amber, in barrels, 5@5¼c; in cans, 1c to 1½c higher. Beeswax in good demand, 26c cash, 28c trade. GRIGGS BROS.

ALBANY, N.Y., Nov. 8.—Our honey market is in healthy condition; demand good; receipts about equal to demand. Prices are not quite as high as last year, but the tendency has been to work off the honey before cold weather, and we think the crop has come forward more than usual this season, which is a good sign. We quote: Fancy white clover, 15c; A No. 1, 14c; No. 1, 13c; buckwheat, fancy, 13c; A No. 1, 12c; No, 1, 11@12c; straight buckwheat is wanted in this market. Extracted, quiet; white, 7½c; mixed, 6½c; buckwheat, 6½c. Beeswax scarce at 30c. H. R. WRIGHT.

PHILADELPHIA, Nov. 20.—The demand has been very good for honey in the past 10 days. In fact, it takes a little sharp, cool weather to get people started, and when they do start, the demand continues for some months. We would say, now is the height of the honey season. We quote, in a jobbing way: Fancy comb, 15@17c; No. 1, 13@15c; amber, 12@13c. Extracted, fancy white, 7@8c; amber, 6½c. Beeswax firm at 28c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

INDIANAPOLIS, Nov. 7.—There is a tendency for higher prices on best grades of honey. The demand for strictly fancy white comb honey exceeds the supply. Demand for lower grades of comb honey not good. Numerous shipments of honey arriving, but no one producer seems to have very great quantities to offer. I quote fancy white at 15@16c; No. 1 in poor demand at 12c, and amber dull at 10c. Best grade extracted brings 8@9c in 60-lb. cans; amber slow at 5c. Beeswax, 28@30c. WALTER S. POUDER.

DENVER, Nov. 11.—No. 1 white comb honey, per case of 24 sections, $3.35; No. 1 light amber, $3.00; No. 2, $2 50@3.00. Extracted honey, 6¾@7 cts. per pound. Supply is light and we could make quick sales of consignments at above figures. We pay 24c for clean, yellow beeswax delivered here.
THE COLO. HONEY-PRODUCERS' ASSN.

CINCINNATI, Nov. 17. — The nice weather holds back the demand for comb honey. Crops seem to be exceedingly short and producers in the West keep the prices high. We quote as follows: Fancy water-white and No. 1 white clover, 14@16c; No. 2, 12@14c. Extracted seems to be more plentiful, and we quote same in barrels, light amber, 5¼@5½c; in cans, ½c more; white clover, 7@8c. Beeswax, 28@30c. C. H. W. WEBER.

NEW YORK, Dec. 6.—The demand for comb honey continues to be fair for all grades. Prices practically remain the same. We quote fancy white at 14@15c; No. 1 at 13c; No. 2 at 12c, and buckwheat at 10c per pound. Extracted honey is in good demand, especially California honey with large supplies. We quote white at 6½@7c; light amber at 6c; buckwheat, extracted, at 5½@6c per pound; Southern at 50@60c per gallon. Beeswax firm and steady at 29@30c per pound. HILDRETH & SEGELKEN.

SAN FRANCISCO, Nov. 28.—White comb. 1-lb, sections, 8@9 cents; amber, 6@7c. Extracted, waterwhite, 4½@4¾c; white, 4¼@4½c; light amber, 3¾@4 cents; amber, 3@3½c; dark amber, 2½@3c. Beeswax, good to choice, light, 26@27c; dark, 24@25c.

The honey market, as has been predicted, has declined quite materially this week. Water white can now be bought at 4¼c in the South, and even at this figure there is little buying. The Hawaiian honey crop has been a very large one this season, and has been an important factor in regulating the price of amber honey. A great deal of the Hawaiian honey has been shipped direct to England, where it is largely in use in the manufacture of various kinds of foodstuffs. California bee-men are being forced to a realization of the fact that honey is produced in so many different parts of the world that a failure of crops in one small district does not necessarily mean higher prices.

85c for 15 NAMES For names and P. O. of 15 farmers and 15c—stamps taken—we will send for 2 yrs. the Farmer's Call—reg. sub. price 50c a year. F. C. is a wkly., 25 yrs. old, 1,300 pages a yr. Sample free. Farmer's Call, Quincy, Ill.

FANCY WHITE EXTRACTED HONEY
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TWO OR MORE CRATES; 7½
LARGER LOTS; WRITE FOR SPECIAL PRICES. ALL F. O. B. CINCINNATI. CASH WITH ORDER. SAMPLES 10c. TO PAY POSTAGE.
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Extracted Honey—Fancy white, 7c; fancy amber, 6½c; ¼c less in 5-case lots or more.
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* * *

Are You Going to the National Bee-Keepers' Convention at Chicago Dec. 19, 20, 21 ?

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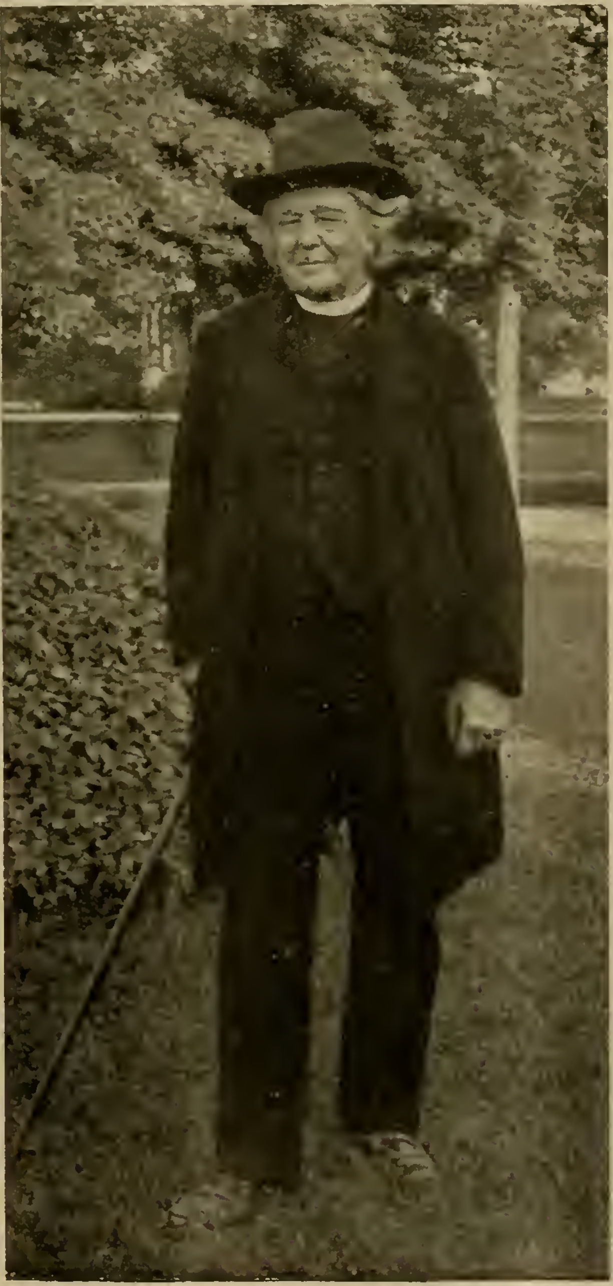
Where you will be cordially welcomed, and where all information can be obtained regarding Convention and city.

Respectfully,

G. B. LEWIS CO.

AMERICAN BEE JOURNAL

45th Year. CHICAGO, ILL., DEC. 21, 1905. No. 51.



To My Wife in Heaven

BY REV. L. L. LANGSTROTH

Wife of my youth—I dream of thee,
  Arrayed in bridal form;
I hold in mine thy trusting hand—
  Hail! happy marriage morn!

To God we vow our glad "I will"—
  Thy soft, responsive voice—
Of twain made one by wedded bands—
  And I, with thee, rejoice.

Sweet, loving wife—God's gracious gift—
  And art thou all my own?
This plighted hand I'll closer clasp—
  Dear Lord! I wake alone.

Ah! silent lips, whose law of love
  So gently swayed my will,
When trusting in thee, heart to heart,
  We were united still.

Weeping lasts but a night, dear wife;
  Joy cometh with the light;
But for a moment darkened days,
  Then where there is no night,

Both shall be present with the Lord,
  Grievings and partings past;
Soul knit to soul by Heavenly bands
  While lengthening ages last.

THE AMERICAN BEE JOURNAL.

PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY

334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec05" on your label shows that it is paid to the end of December.

SUBSCRIPTION RECEIPTS.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows that the money has been received and credited.

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Objects of the Association

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00

General Manager and Treasurer—
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☞ If more convenient, Dues may be sent to the publishers of the American Bee Journal.

The Honey-Producers' League

(INCORPORATED)

OBJECTS:

1. To create a larger demand for honey through advertising.
2. To publish facts about honey, and counteract misrepresentations of the same.

MEMBERSHIP DUES

1. Any bee-keeper may become a member by paying to the Manager an annual fee of $1.00 for each 20 (or fraction of 20) colonies of bees (spring count) he owns or operates.
2. Any honey-dealer, bee-supply dealer, bee-supply manufacturer, bee-paper publisher, or any other firm or individual, may become a member on the annual payment of a fee of $10, increased by one-fifth of one (1) percent of his or its capital used in the allied interests of bee-keeping.

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334 Dearborn St., CHICAGO, ILL.

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H. M. ARND,
Mgr.

When attending the National Bee-Keepers' Convention at Chicago, Dec. 19, 20, 21

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THE BEE AND HONEY Co., Beeville, Texas	"	Texas
E. H. TAYLOR, Welwyn, Herts, England	"	Great Britain
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Mention Bee Journal when writing. GUS DITTMER, Augusta, Wis.

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49A3t ARTHUR RATTRAY, Almont, Mich.

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Your Bee-Hives, Sections, Shipping-Cases, Berry Boxes, and Crates for the coming season. By sending us a list of goods wanted, **we can save you money.**

SHEBOYGAN FRUIT BOX CO.
35A18t SHEBOYGAN, WIS.

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This Catalog is better than ever. It is valuable, not merely for the listing of Supplies and the economy in prices, but also for the valuable hints to bee-keepers contained therein.

This Catalog has been nearly a year in preparation, and as a handy book for the average bee-keeper it has no equal. Send your name in at once; we begin mailing right after Jan. 1st.

In the meantime write us for prices on any Supplies that you may want. Better still, let us quote you prices for any delivery on next summer's Supplies. We can do work cheaper at this time of the year than is possible during the rush season.

JOHN DOLL & SON, Power Bldg., Minneapolis, Minn.

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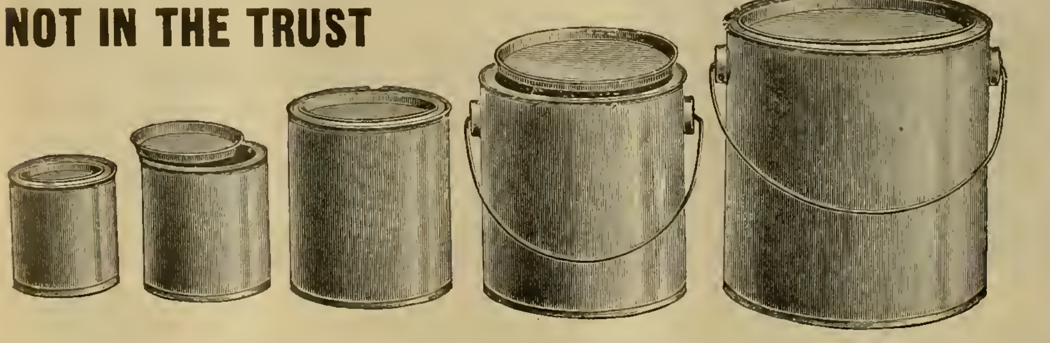

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Mr. Boyden is thoroughly familiar with our line of Supplies, and is also a born beekeeper. He knows the city. We trust our friends will feel perfectly free to ask his services in any way. Mr. Boyden will be present at the National Convention, and stands ready to accommodate you.

Our Line for 1906

OUR HIVES AND SECTIONS

Our hives and equipment, both for workmanship and clearness of stock, can not be excelled, and we doubt if they have ever been equalled. So strong is the demand for these goods that there has been a strife in many cases among dealers to get the Root Company's lines because they knew that everything that bears the Root brand is always popular with the customer, and always the best that money and brains can produce.

Our sections and frames for 1906 are even better than ever. They are inspected and re-inspected, and each inspector is required to put in each box of sections that he passes upon his own inspector's card, so that if complaint is made this card will come back on him. As he is anxious to hold his position and if possible get an increase in pay, it is clearly to his interest, as well as that of the customer, to let nothing but perfect goods pass.

THE ROOT AUTOMATIC EXTRACTORS

Our extractors for 1906 in point of improvements and quality of workmanship leave everything else in the shade. The four, six and eight frame machines have the finest automatic reversing mechanism that has ever been put into a machine. Even the two-frame models can have the reversing mechanism put on at a slight additional cost; but we do not ordinarily advise buying the two-frame automatic. Steel construction has been substituted for cast iron wherever practicable.

OUR CATALOG FOR 1906

A great improvement over last year. Entirely revised and rewritten. New cover. New cuts. Every article is classified. No price-tables to confuse. The price of each article is directly under the description or illustration. The first edition is now on the press. If you wish a copy of this let us have your name *now*.

CHRISTMAS 1905
GLEANINGS IN BEE CULTURE
THE A. I. ROOT CO
MEDINA, OHIO, U.S.A.

December 15th Gleanings

✻

When this issue of the American Bee Journal reaches you our Splendid Christmas Issue will be ready for mailing. Without doubt the finest bee-magazine ever printed. Three-Color Cover. 100 pages of matter. Many beautiful halftones. Extremely valuable articles. We have a limited number of copies which we will sell at 10 cents each. Better send 25 cents *now*, and we will send the Magazine for 6 months' trial, and include this number, or, better still, send $1.00 for the year. You will find Gleanings in all principal clubbing lists.

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THE A. I. ROOT COMPANY, Medina, Ohio

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Established in 1861
THE AMERICAN
Oldest Bee-Paper in America
BEE JOURNAL

(Entered at the Post-Office at Chicago as Second-Class Mail-Matter)

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor | CHICAGO, ILL., DECEMBER 21, 1905 | Vol. XLV—No. 51

Editorial Notes and Comments

Father Langstroth's Heretofore Unpublished Poem

The front page this week will, we believe, be admired and also appreciated by every reader of the old American Bee Journal. The poem was written and sent to us by Father Langstroth himself, in August, 1895, just a month or so before his death. We have kept it all these years, and now, at this Christmas convention season we publish it with the excellent full-length portrait of the great, loving and beloved Langstroth, whose name and memory are revered by every bee-keeper who knows anything at all about the interesting history of American bee-keeping.

As we read his tender lines to his wife, who had preceded him, we get a glimpse of his loyalty and devotion to one whom he adored throughout the long years of wedded bliss, and whom he expected soon to meet and greet in "The Better Land."

Langstroth! Some day there should be written a volume containing a detailed account of the life and work of Lorenzo Lorain Langstroth, for the benefit of the world of bee-keepers, for to his invention of the movable frame all who to-day are enjoying profits from the honey-bee owe their success.

Shall We Take More than One Bee-Paper?

The effort is constantly being made to have the American Bee Journal so comprehensive and instructive that it shall, as nearly as possible, contain all that is necessary to keep its readers fully abreast of the times, so that they will not need any other bee-paper. The same, no doubt, may be said of other bee-papers. Please notice, however, that phrase, "as nearly as possible"—it is advisedly spoken. When all possible effort has been made, it still remains true that some other paper may contain something of so much value that its knowledge might well be worth the year's subscription. The editor of Gleanings well says:

> "If any one keeps bees for the money he can make out of them, he ought *by all means* to take not only one journal but two or three of them. Gleanings does not pretend to cover the whole field of apiculture. The personal bias of an editor, even though that bias be unconscious, may cause him to emphasize certain developments of bee-lore to the total neglect of all others. As I look over our exchanges I can see fields that they are covering that Gleanings is not; and, conversely, I can see fields that we are covering that they do not.
>
> "W. L. Coggshall, perhaps the most extensive bee-keeper in the world, once said to me that he could not afford not to take all the bee-papers published in the United States and that, moreover, he could not afford not to scan every page after they came into his hands."

Even if nothing entirely new were to be found in other papers, it sometimes happens that the same truth presented in different words appears in a different light to the reader, so that it is almost like the reception of a new truth. "Keep more bees" is likely to be good advice. Equally good is the advice, "Take more than one bee-paper."

A Western Convention on Wheels

Editor Aikin, in Irrigation, suggests that if a number are going to the Chicago convention from Colorado, they might get together on the same train, "and so have a convention all the way through." These traveling conventions have proven very pleasant on other occasions, and have some advantages over the more usual kind. But it is somewhat cheaper to "hire a hall" than a railroad car.

Prevention of Granulation of Honey

An item in Praktischer Wegweiser says honey will remain liquid if put in tin or glass vessels and then allowed to stand 5 or 6 days in the sun in a solar wax-extractor. Whether this proves an entire success or not, one can easily believe that the tendency will be in that direction. More than one case has been reported of section honey kept in an attic, where the fierce heat of the summer so cured it that the zero weather of the following winter had no bad effect on it.

Caucasian Bees—Various Opinions

Reports as to a new race of bees are generally more or less contradictory, and there is no exception in the case of the Caucasians, unless it be that accounts are more contradictory than usual. Ratings vary all the way from worthless to the very best. As to their appearance, little has been said beyond the fact that they are so like blacks in appearance as to be difficult of recognition. The following description, written by "Swarthmore," in the American Bee-Keeper, is therefore of interest:

> "Caucasians are very dark, inclined to vary a little, striped with narrow brownish bands, with a cast of brownish hairs, somewhat like the Carniolans. The workers are quite small, but very active; the drones are as black as your

shoe, much smaller than Italian or Carniolan drones; the queens are not large, quite dark, with bronze or copper-yellow spots on their under sides; very prolific. Both queens and workers are quite nervous under manipulation, but do not run off the combs nor pile in knots, as do the blacks. Caucasians are exceedingly gentle, and will submit to manipulation, almost to actual abuse, without resentment. They seldom require much smoke—the breath often only being needed to open their hives and to drive them back. Yet they are alert in defense against robbers."

Driving them back with the breath seems to work in a peculiar manner upon Caucasians. Blowing the breath upon other bees is likely to be the signal for a prompt attack upon the blower.

Shipping Carloads of Comb Honey

Mr. Leo F. Hanegan, manager of the St. Croix Valley Honey-Producers' Association, referring to several statements made recently in the American Bee Journal about the number of pounds in a carload of honey, etc., writes us as follows:

George W. York & Co.—

Gentlemen:—Regarding the amount of honey to a carload, I will say that our experience is that 1000 to 1500 24-section cases of comb honey make a fair load; in fact, all that we feel safe in piling in one car. We have shipped 1963 24-section cases in one car, and over 1650 in another, but, if we were correctly informed, the honey did not arrive in as good condition as it should have done.

In the Western Freight Classification the minimum car of comb honey is put at 30,000 pounds. There is no use to load over that amount. Taking out case tare and straw leaves about 25,000 pounds net of honey. Our largest car recently shipped cost the buyer $5000, f.o.b.

Yes, 1200 24-section cases make a good car, and all that need be put into one car.

A box-car will do, but a refrigerator car is tighter when sealed, so that dust can't get in in transit. Also, a refrigerator car is heavier and better built, and, therefore, rides easier, and ordinarily will hold all that should be put into one car.

In the American Bee-Keeper for June, 1905, the writer brought out some points relative to this carload question, and asked for discussion of the subject, but received no response.

Shipping comb honey in carload lots is the safest and most satisfactory way to move it a long distance, and this subject should have its place in the bee-papers, as well as how to produce honey.

I am sending you a copy of the American Bee-Keeper referred to above, and will furnish the engravings used therein if you wish them.

Yours truly,

Glenwood, Wis., Oct. 19. Leo F. Hanegan.

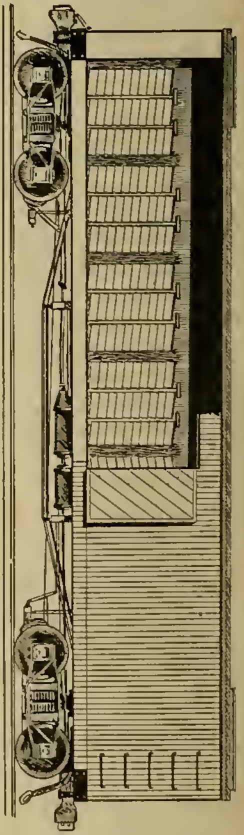
We take the following extracts from the article referred to by Mr. Hanegan as having appeared in the American Bee-Keeper, which was written by its editor:

Some time ago, Mr. Leo F. Hanegan, manager of the St. Croix Valley Honey-Producers' Association, sent a photograph showing a side-tracked car which his Association was loading with comb honey. Some correspondence in regard to their method resulted, and considerable interesting information was secured.

In the first place, a clean, dry refrigerator car is ordered, though, of course, no ice is used, but a clean, dry car is important.

The accompanying drawing will illustrate the manner of loading about 1200 24-section cases, making a good load. The car in the sketch contained 1100 such cases, and represented a cash value of about $2900, f.o.b. at loading point.

LOADING A CAR WITH COMB HONEY, IN WISCONSIN



MANNER OF LOADING COMB HONEY

About 3 inches of straw upon the floor is used; at the ends 15 inches. Between the tiers about 6 inches of straw is securely packed, with only enough at the sides to make the shipping-cases fit snug and tight. The straw should be clean, and oat-straw is preferred.

Where a full carload is to be shipped, the cases are packed 10 high; but if a less number the tiers are not made so high, as they should be so loaded as to meet at the middle of the car.

It should be noted also, that the cases pitch forward toward the middle; and that the "break joints" thus add to the solidity of the aggregated weight.

Unless the buyer specifies other method of loading, this plan is always followed, and upon each end and each door of the car a caution card—"Handle with Care"—is tacked. That is, cases are loaded from each end, and the meeting-place solidly packed with oat-straw, which packing comes well above the tiers of cases.

Over the joints of tiers in the drawing may be seen the ends of stout cleats or beams crosswise of the car, which serve to hold down the cases. These, however, are used only over the joints of the 3 end rows, though our artist has tried to make things doubly safe by using them throughout the length of the car.

Mr. Hanegan further advises that before loading a car with comb honey one should be sure that it has no "flat wheels," as "a flat wheel will make mush of a load of comb honey in short order." HARRY E. HILL.

Mr. Hanegan says further, in a letter to us, that the cases do not stand as sloping as represented in the smaller engraving. By loading thus he feels that honey will stand more rough handling than by loading in any other way. He has loaded very large cars where the honey was packed solid, with some 12 inches of straw in each end of the car. The honey in cars packed thus, however, did not arrive in as good condition as when packed with straw between every few tiers of cases.

Mr. Hanegan very kindly offers to furnish any further information that may be desired by our readers. We shall be pleased to hear from other honey-producers who have had experience in shipping carloads of honey. This is a very important subject, and one that specialists in comb-honey production will need to consider more and more as the years come and go, and as their interest in bee-keeping increases.

Miscellaneous News Items

A Merry Christmas to every reader of the American Bee Journal is our wish.

He Reads Two B's.—A North Carolina bee-keeper was asked lately what he was reading. His reply was: "Two B's. The Bible and a Bee-book."

The National Convention for 1905 will be almost closed by the time the majority of the readers of this number of the American Bee Journal receive it. We expect to publish a full report of the proceedings in these columns as soon as possible after the convention. The program as prepared by Secretary Hutchinson is given below.

Samuel Dysart, of Franklin Grove, Ill., wrote us as follows on Dec. 4:

> I have taken the American Bee Journal almost continually since it was published by Wagner, in Washington, D. C., which must be nearly 50 years ago. I kept bees then, and I have them now, and desire to keep company with what I call my little friends as long as I can look after them.
>
> With kind regards to all lovers of the honey-bee, I am
>
> Yours respectfully, SAMUEL DYSART.

We are very glad indeed to hear from the older readers of the American Bee Journal, which was started by Samuel Wagner, in January, 1861, so it is not quite 50 years ago. Occasionally we receive a letter like the one from Mr. Dysart, although we suppose there are not very many among our subscribers who took the American Bee Journal when it first started, and have continued ever since. If it were possible to get them all together in one group, we would like very much to have a photograph taken of them to use in the Journal.

Considerate Bee-Keeper.—Mr. E. Brubaker sends us the following clipping:

> A thoughtful bee-keeper was greatly harassed by the question ever uppermost in his mind, "Have I any right to rob these bees of their honey?" After a long time he settled the question this way:
>
> "I used to feel mean about robbing the bee-hives, but after thinking the matter over I see now I am right. If it wasn't for me taking the honey, all of them bees would be out of work the whole of next summer."—Boerne Post.

But "all of *them* bees would be" dead by "next summer." So his considerateness for the bees was all wasted. But he doubtless got the honey for it, anyway.

Mr. Thos. Wm. Cowan, editor of the British Bee Journal, who has been spending some months in California, wrote us from Vancouver, B. C., recently:

> DEAR MR. YORK:—We are just starting East, and hope to reach London before Christmas, so as to be with all our family again. We have much enjoyed our visit, and were pleased again to see our friends. We have met friends all along our route, and have had a hearty reception.
>
> Yours truly, THOS. WM. COWAN.

We trust that Mr. and Mrs. Cowan may arrive in London again safely, and in good time to enjoy the holiday season with their family and old-time friends in the homeland.

The Minnesota Convention was held Dec. 6 and 7, in Minneapolis. We expect to publish a report later. The officers elected for the ensuing year are as follows:

President, Dr. L. D. Leonard, of Minneapolis; 1st Vice-President, Scott La Mont, of Jarretts; 2d Vice-President, J. M. Doudna, of Minneapolis; 3d Vice-President, J. W. Murray, of Excelsior; Secretary, Rev. C. B. Blaker, of Richfield; and Treasurer, W. S. Wingate, of Minneapolis. Executive Committee, H. G. Acklin, of St. Paul; Rev. J. H. Kimball, of Duluth; and Wm. Russell, of Minneapolis.

Why Not send in some new subscriptions for the American Bee Journal? Samples free for the asking.

PROGRAM FOR THE NATIONAL CONVENTION.

FIRST DAY—TUESDAY.

EVENING SESSION—7:30 P.M.

Wax-Rendering Methods and their Faults—O. L. Hershiser, Buffalo, N. Y.

Can the Tariff on Comb Honey be Tinkered to the Advantage of the United States Bee-Keeper?—Hildreth & Segelken, New York.

SECOND DAY—WEDNESDAY.

MORNING SESSION—9:30 A.M.

How Many Bees Shall a Man Keep?—E. D. Townsend, Remus, Mich.

Short Cuts in Bee-Keeping—M. A. Gill, Longmont, Colo.

Question-Box.

AFTERNOON SESSION—2:00 P.M.

The Control of Increase—L. Stachelhausen, Converse, Tex.

Migratory Bee-Keeping—R. F. Holtermann, Brantford, Canada.

The Dietetic and Hygienic Relations of Honey—Dr. E. L. Eaton, State Analyst Illinois Food Commission, Chicago.

Question-Box.

EVENING SESSION—7:30 P.M.

Contagious Diseases Among Bees and How to Distinguish Them—Dr. Wm. R. Howard, Ft. Worth, Tex.

Experimental Apiculture—Dr. E. F. Phillips, Washington, D. C.

THIRD DAY—THURSDAY.

MORNING SESSION—9:30 A.M.

The Honey-Producers' League—Can it Help Bee-Keepers?—R. L. Taylor, Lapeer, Mich.

The Business End of Bee-Keeping—N. E. France, Platteville, Wis.

Successful Experience in the Making of Honey-Vinegar—H. M. Arnd, Chicago.

Question-Box.

AFTERNOON SESSION—2:00 P.M.

In What Way Can Bee-Keepers Secure their Supplies at Lower Prices?—W. H. Putnam, River Falls, Wis.

How the Producer and Dealer May Advance their Mutual Interests—Fred W. Muth, Cincinnati, Ohio.

Question-Box.

EVENING SESSION—7:30 P.M.

What Have We to Hope for from the Non-Swarming Hive?—L. A. Aspinwall, Jackson, Mich.

Poultry Keeping for the Bee-Keeper—Emerson T. Abbott, St. Joseph, Mo.

Contributed Special Articles

Honey Markets—Bees and Pollination—Cleome

BY PROF. A. J. COOK.

SINCE coming to Europe I have been surprised at two things: First, the apparent scarcity of honey as an article of food; and, second, at the high price which it brings in the market.

As to the first point, let me say that though I have been in all the British Isles—England, Ireland, and Scotland—in France, Belgium, Holland, and now in Germany, yet not in a single case, either at hotel or pension, has honey been put before us. Several times I have called for it, only to be told that there was none at hand. I had been told that in Europe honey was as invariably a table article as is butter in America. True, this was said of Switzerland, and as yet we have not feasted at the boards of the Swiss. But so far as I have seen and tasted this incomparable sweet, the best of all the carbohydrate foods is most marked by its scarcity in all European hostelries. I would that honey might be known and tasted, yea, freely eaten by all who crave this delectable food.

Again, honey is very high in all the countries where I have visited. I ask for it at the groceries, only to be told, in case it is to be had at all, which very often it is not, that it is, in Britain, from ¾ to 1 shilling—that is, 18 to 25 cents per pound; in France and Belgium, a franc or more, which is 20 cents; in Holland about the same, while here in Berlin it takes a mark (about 25 cents) to get a pound of comb honey.

It is unfortunate that our splendid comb honey cannot reach the consumer at a price that he can afford to pay, even though he be a laboring man, earning his daily bread by the sweat of his brow. Such men are often—very often—God's best servants, and so most deserving his best bounties. Surely, it ought to be the good work of our associations so to plan that such wholesome food as honey shall reach the eater at a price that he can afford to pay, even though he be an humble member of society.

If our associations could so plan that enough of the middle men would be eliminated so that prices would remain within the reach of the day-laborer, a great blessing would be wrought. I believe that the American bee-keeper could live and thrive if extracted honey could always be sold at 6 cents per pound, and comb honey at 10 cents per pound. Can we not fashion machinery that will carry this to the table at a 50 percent advance—say 9 cents for extracted and 15 cents for comb? What a boon it would be could the world's poor get these, and even better rates on second-grade honey! I hope our associations, such as have been organized in some of the States, as well as the National Association, will hammer away on this proposition till results come that will bless the producer and the consumer alike.

I am also rather surprised to learn how away-behind the European honey-producer is in the way he puts his honey into the market. True, I have seen some fine, clean sections, but for the most part, when I have called for honey I have been offered an article that would find no buyers at all in the marts of our own cities. This, I believe, is true all along the line. We do our work better and practice methods that are far more brainy than are those used here. In getting from Europe such masters as the Dadants, and Grimms, I believe we have secured the very best that Europe has to give. The rank and file of those who hold the plow—all those who work in manual-labor pursuits—read and study far less than do our farmers, orchardists, and bee-keepers. Their ways are away behind ours, and their methods are surprisingly not up-to-date.

Bees and Pollination.

I am surprised to find how few in Europe, especially in Britain, depend solely upon bees for their support. I am told, by reliable authority, that only one person in all the British Isles is exclusively a bee-keeper. It is said that he is constantly facing the "wolf at the door," yet there are hosts of small bee-keepers, who keep a few bees. Thus the number of bees is greater than in many sections of our own country. I believe the good that comes to European agriculture from this redundancy of bees is far from being appreciated. Bees do a grand work in cross-pollinating the flowers of orchard, garden and field. They help tremendously in increasing the productivity of crops by this necessary work. Speed the day when every section of the United States shall be as populous in bees as is the best stocked countries of Germany, Switzerland, and Austria.

Yellow Cleome.

A subscriber from Arizona sends me flowers of what we may well call the "Arizona Bee-Plant," or yellow cleome. He says it often yields very abundantly of nectar, and barring the fact that it often fails utterly as a honey-plant, he would regard it as one of the very best honey-plants of the world. He adds that the years of failure are in the majority.

This is a close relative of the famous Rocky Mountain Bee-Plant, or we may well call it the Colorado Bee-Plant. The latter is pink, while this Arizona one is yellow.

This is known to science as Cleome lutea, or yellow cleome. It is also closely related to the other cleome, or spider-plant. I mention both the other plants in my "Bee-Keeper's Guide," but not this one. It deserves a place in the list.

It will be remembered that, years ago, in the '80's, when I experimented under the auspices of the U. S. Government, to determine if special planting for honey was practical, I used Cleome integrifolia as one of the plants. I found, just as our friend says of this Arizona bee-plant, that it very often failed to give any honey at all. I drew the conclusion,—and I see no reason now to change the verdict,—that special planting for bees is not a practical proposition. Often the results will be nothing, and thus the balance will be on the loss side of the ledger.

We may well plant sweet clover and the mints by the roadside and in waste-places; we may well plant lindens, tulip trees, etc., along the highways (eucalypts or acacias, if in the arid regions); we are wise to encourage farmers in sowing alfalfa, alsike, buckwheat, etc.; but I do not believe it will ever pay to use good land to produce plants that are only valuable for honey.

Were I to locate an apiary, I should like, if possible, to be close by large orchards, to have the early stimulative effects of orchard bloom. For like reasons I should like to have abundant soft maples in the East, and many buckthorns in California. Above all, I should wish hard by the basswoods and white clover in the East, and sages and wild buckwheat in the West. Berlin, Germany.

⁂

Economy of Wintering Bees in the Cellar

BY C. P. DADANT.

I FIND the following from the pen of Dr. Miller, in Gleanings in Bee-Culture:

"C. P. Dadant says in the American Bee Journal that 8 or 10 pounds is a fair estimate of the honey consumed by a colony wintered in the cellar, and nearly double that by a colony on the summer stand in a cold winter. According to that, for the labor of carrying in and out one would get about 8 pounds of honey for each colony. Good pay. At the same time, I'd be glad to feel sure that the cellared colony is just as well off in all respects."

This item has called my attention to the fact that I have perhaps not explained my meaning sufficiently. I did not mean to say that the amount stated would carry a colony from crop to crop, but only through the real winter—the time when bees are kept in the cellar. My experience has been that the colony wintered out-of-doors has in the meantime produced a larger quantity of brood than the colony wintered in the cellar; that when the cellared colony is taken out, it has to get accustomed to the changed conditions and has to begin to breed, and that it, in the end, spends a goodly portion of the savings in catching up with the other, wintered out-of-doors.

I have often heard Canadian bee-keepers say that their bees breed in the cellar, at the end of winter, but I have seen very little of this in our latitude. Different conditions cause different results. We do not leave our bees so long in the cellar here, as they do at the North. We cannot, for as soon as the warm days come the difficulty arises of keeping them quiet. That is why we have ceased wintering bees in the cellar, although there is occasionally a season when we would be glad to have them indoors.

But we are unable to foresee cold winters. Many a man has tried to predict the future weather. Many a man has said that the bees, the animals, the corn, even, prepared for a cold winter when it was coming. I believe this is all a mistake. Neither the insects nor the plants know more about the future than we do, except that through years or centuries of natural selection, those succeeded best and survived that bent themselves to the changes of seasons.

Some farmers say that the corn has a heavier husk when a hard winter is coming. I wondered how this could be, until one season I was told by two different farmers of great experience that the winter would be hard, and that it would be mild, for the one said, "The corn husks are heavy," and the other said, "The corn husks are light."

I can see very plainly that Dr. Miller understands the situation in regard to cellar-wintering fully as well as I do, for the last remark he makes, "I'd be glad to feel sure that the cellared colony is just as well off in all respects," indicates that he realizes the difference in conditions at the time when the hive is taken out of the cellar. If I were as far North as Dr. Miller, I believe that I would winter my bees in the cellar every winter. One winter or even a half-dozen winters are not sufficient to decide the question. But for years we tried cellar-wintering side by side with outdoor wintering, placing sometimes an entire apiary, sometimes only a portion of it, in the cellar prepared purposely for them, while other apiaries remained entirely out-of-doors.

After all these trials I have come to the conclusion that it is as well to risk outdoor wintering in this latitude. But with small hives, or weak colonies, short in stores, and a good cellar in easy reach of the apiary, I would still recommend cellar-wintering. A little south of us, or below the 40th degree, I believe cellar-wintering should be discountenanced, while north of this latitude it is probably more profitable to winter the bees in the cellar.

I wish, in closing, to thank Dr. Miller for the remarks made, as these have called my attention to the possible misunderstanding I caused. If there is a bee-keeper whose opinion I value above all others, it is Dr. Miller, for he has a very extensive practical experience, and never advances a thing unless he is sure of it. He never jumps at conclusions, and never supports that which he has not proven correct.

Hamilton, Ill.

Best Bee-Hive—Something About It

BY G. M. DOOLITTLE.

A SUBSCRIBER to the American Bee Journal writes: "Will you describe the best bee-hive, and tell us something about it, as I wish to make some hives the coming winter."

This is a hard question to answer, for nearly every person keeping bees believes he or she has the *best bee-hive* in existence, and when I say that the number of different bee-hives in use reaches into the scores, if not into the hundreds, it will be seen how difficult it would be to do as requested.

Probably the hive most in use (unless, perchance, it is the box-hive) is what is termed the "Langstroth." Then next in order comes the Gallup, Quinby, Danzenbaker, Hoffman, Simplicity, Heddon, American, etc., nearly all of which are only a modification of the Langstroth to suit the different notions of different persons using them and putting them before the public, for there is scarcely a frame hive today but what embodies more or less of the Langstroth principles, especially as to bee-space and the frame principle.

With the progressive bee-keeper the box-hive is a thing of the past, although there are a few using them which do quite a good business with them, by having the combs built to slats along the top of the hive, with a movable top-board so that the surplus boxes or sections can be set right over the combs. With the farmer bee-keeper—one who never thinks of handling the frames or even looking inside of the hive—a box-hive so arranged would probably be as good for him as the best frame hive ever made. But such a one could not be considered a progressive bee-keeper.

Excluding, then, the box-hive, we have a simple box arranged for bee-spaces and containing frames as the *best* hive, letting him or her who uses it make said box and frames of any dimensions which they may choose.

As "my notions," away back in the early seventies, led me to prefer the Gallup form of the Langstroth frame, I will briefly describe how this hive is made, so that anyone can make it, or a modification of it, as he pleases.

Get lumber 12 inches wide and ⅞ of an inch thick, planed on one side (or both, as you please), and saw it into lengths so that when nailed you will have a box without top or bottom 12 inches deep, 12 wide, and 18 inches long, inside measure. Before nailing, on the upper inside edge of the two long boards rabbet out a space ½ inch deep by ⅝ back, for the frames to rest on, and on the bottom edge of one of them cut out a piece 12 inches long by ¾ deep, for an entrance.

A plain board of the right size, with two pieces of 2x4 stuff nailed on the under side near two edges of it, running crosswise of the grain, constitutes the bottom-board or stand for the hive. If it is preferred, the hive itself can be made without the entrance cut in it as above; and, if so, then cut out strips from the ⅞ stuff ⅜ thick, and after cutting them the right length, nail them to three sides of the upper side of the bottom-board, when the fourth side, not having one of these strips nailed to it, will constitute the entrance, which can be contracted to any desired dimensions by using entrance-blocks, giving an entrance of ⅜ by 4 inches for winter and early spring, up to the whole width of the hive for summer.

The frames are made of stuff sawed ¼-inch thick from an inch board, and cut to the right length so that when nailed together the outside of the frame will be 11¼x11¼ inches square. The top-bar to the frame is to be long enough to project ¾ of an inch at each end, so as to hang on the rabbet prepared in the upper part of the side boards of the hive for them. Hang the frames in the hive so 12 of them fill it, and the proper bee-spaces will be given, according to my views, as I prefer a space 1½ inches from center to center of the frames, having tested the matter for years.

Make the surplus part of it to suit your notion, with or without a honey-board, and with or without a cap or hood. If you use a cap or hood, then the cover can be a board of the right size to cover the top, or the same can be of enameled cloth, quilt, canvas, or anything you may choose, with the cap or hood filled with leaves, chaff or sawdust above the cover for wintering. Where no cap or hood is used, then a cleated board, water-proofed in some way, should be used as a cover, the same being a cover for the hive and the surplus arrangement, as well, when that is on.

In the above we have the best bee-hive principle in existence, and one which can be made in any conceivable shape to suit the desires of the most fastidious, and yet the word "LANGSTROTH" suggests all there is of it, and carries the minds of all who delight to honor the Father of Modern Apiculture back to the time when this noble man (who passed to his heavenly home a few years ago), spent hours, days and years of toil and study in inventing this principle, that we, his apicultural children, might profit and enjoy that which he wrought out for us.

At the out-apiary I use the regular Langstroth frame, and 10 of these to the hive. Where an apiary is worked on the "shook-swarming" plan, a large hive seems to give the best results; and an out-apiary cannot well allow natural swarming.

Borodino, N. Y.

Convention Proceedings

Report of the Texas Convention

BY LOUIS H. SCHOLL, SEC.

(Continued from page 865)

Mr. Aten, in behalf of the bee-keepers, asked for a statement concerning the work of the experimental apiary.

Mr. Scholl went over the ground since the establishment of the apiary, and what had been done. He also gave an outline of the experiments contemplated, together with other work now under way, and some of the problems that are to be solved, as follows:

DOES ALFALFA PRODUCE HONEY IN TEXAS WITH OR WITHOUT IRRIGATION?

With the advent of irrigation in the arid regions, will Texas ever be classed with the Western States that produce enormous amounts of alfalfa honey annually?

It is the general belief that alfalfa is a good honey-producing plant, but no satisfactory data to that effect in Texas has been obtained. Investigations of this subject therefore would be highly valuable. If, as irrigation and the growing of alfalfa advances, the honey-yield is relatively increased, many localities for the location of new apiaries will be opened, and it will mean thousands of dollars to this State.

AMOUNT OF HONEY TO MAKE A POUND OF WAX.

To determine definitely the amount of honey consumed by bees in making 1 pound of wax.

It is claimed by some apiarists that from 12 to 24 pounds of honey are required to produce one pound of wax. Others claim this to be too high, and give 7 to 8 pounds of honey to one of wax.

SWARMING.

Careful study and experiments with proposed methods of controlling and preventing swarming. In connection with this, manipulations of the brood-nest and combs to stimulate additional brood-rearing and added surplus production.

If this can be overcome in the College apiary it should be possible to produce a fair crop of surplus honey annually in an average season with 20 colonies, a greater number exceeding the supply of the locality.

LENGTH OF LIFE OF DIFFERENT RACES OF BEES.

A test of different races of bees to determine the comparative length of life of the individual bees in these different races: Holy Lands, Goldens, Three-banded Italians, Cyprians, Carniolans, and Blacks.

Get all colonies ready and of the same strength, and dequeen and introduce a queen of a different race and color. Subtract the days between dequeening and requeening.

RACE OF BEES FOR TEXAS.

Race of bees adapted to the varying conditions in different parts of Texas.

Queens of selected races to be reared at the College and distributed among experienced apiarists in different parts of the State, who will take careful note of observations and report to the Department. A reasonable amount of cost is to be charged for such queens, in half-dozen lots, which will contribute to the income of the apiary and yield results at the same time.

QUEEN-REARING.

Experiments in queen-rearing. 1st. To determine the quickest and best methods of rearing *good* queens; and 2d, an attempt to determine method of controlling the mating of queens, or mating in confinement.

Would naturally come under No. 6, in rearing the selected queens and getting them purely mated.

DISEASES OF BEES.

Investigation of foul brood, black brood, pickled brood, and bee-paralysis, to determine needed facts regarding the same, as method of infection, resistance of germs and spores, etc.; method of treatment in eradication, fumigation, etc.

Not practical without a well-equipped bacteriological laboratory, but which can easily be established with material already in the Department.

DISTANCE BEES RANGE.

How far may bees travel to gather honey profitably? How far should bees range to secure the maximum amount of honey (with most profit) from a given territory?

A valuable factor in locating apiaries, as on the Brazos river, to determine whether bees can be profitably located on high bank on the College side of the river in comparison with those located on low land nearer the honey-producing territory which is subject to overflows.

HONEY-PLANTS OF TEXAS.

A study of the honey-plants of Texas and of the territory surrounding College Station.

(a) Card cataloging above honey-plants as already under way.

(b) Listing distributions of honey-plants of the State on area maps of Texas.

(c) Making a complete herbarium collection of Texas honey-plants.

(d) Making a complete card catalog according to their blooming periods, with the length of blooming periods, importance of honey or pollen, and their distribution.

HIVE TEMPERATURES.

Testing various styles of hive-covers to determine their resistance to heat, by the use of thermometers, making close observations during the hot season.

Ascertaining the difference in temperature existing in hives placed in direct heat of the sun, with and without shade-boards, compared with several in the shade.

FOR FUTURE EXPERIMENTS.

Experiments that might be taken up later, but necessitating a location of better honey-production than is possible at College, could be made possible by having established an out apiary in the Brazos river bottom, about 10 miles from College. Valuable data on the following could be obtained by locating such a yard.

(a) Establishing outyards; the selection of the location; best arrangement to make with the land-owner in regard to permit to locate, rent, and hiving of swarms.

(b) Best method of moving bees to outyard; placing and arrangement of hives.

(c) Management of outyards, with a view toward the largest amount of profit with the least amount of time of labor and expense.

(d) Best race of bees for outyards; the best for the largest yield of honey; a comparison of different races for such.

(e) Hives. Best for honey-production; best for manipulation to prevent swarming.

(f) Prevention of swarming, to increase the yield of honey and profits, to decrease amount of labor and expense; and to prevent loss of swarms where no person is present to care for them. This can be accomplished to a great extent by the right method of management with the right kind of hive, and the right kind of race of bees.

There are also other matters under consideration for experiment, and these will be taken up as time permits. The above is simply an outline that was written out some time ago, and it may be changed from time to time, as best suits the time and the favorableness of the seasons.

LOUIS H. SCHOLL.

It was moved and seconded that a vote of thanks be extended to Mr. Scholl for his kindness and generosity towards the bee-keepers.

Mr. White thought that the Texas Bee-Keepers' Association should give Mr. Scholl such help and encouragement as would enable him to carry out the work at the College apiary. Much good could be done if the bee-keepers put all heads together, and he believed that the bee-keepers ought to help him.

Mr. Aten moved that a committee be appointed to consult with the proper persons in regard to having experimental work done at the experimental apiary, and concerning other matters pertaining to the apiary. The motion was seconded and the following committee was appointed: F. L. Aten, W. O. Victor, C. A. Butts, and W. H. Laws.

J. F. Teel related some experiments with different kinds of honey-plants that he has conducted. These included alfalfa, buckwheat, and clovers of all kinds. Alfalfa yields some honey during the heat of the day, buckwheat yields until 9 or 10 o'clock when dewy mornings prevail, but few of the clovers, however, amount to anything with him.

ELECTION OF OFFICERS AND MEMBERS' REPORTS.

The election of officers for the next term resulted as follows, each one being unanimously elected, the secretary-treasurer of the Association being re-elected for the eighth time: President, F. L. Aten of Round Rock; vice-president, Willie Atchley of Beeville; and secretary-treasurer, Louis H. Scholl of College Station.

On account of lack of time the minutes of the last meeting were not read, and a committee was therefore appointed to inspect and report upon the books of the secretary-treasurer at the next meeting. This committee consists of Willie Atchley, C. A. Butts, and J. F. Teel.

The total number of colonies represented by the members present who reported to the secretary was 7,550 colonies. The Texas honey crop thus far was short, but prospects were good in most localities, while not so good in others

The members reporting, the number of colonies, the amount of honey obtained to date, and prospects at present, are as follows:

F. L. Aten of Round Rock—200 colonies. Bees in fine condition. Finest flow on he ever saw. Bees do not notice loose honey left in the yard.

J. M. Hagood of Enloe—80 colonies. Gloomy prospects. Bees weak. Cotton poor, but may have flow yet. Has had flow as late as October.

J. W. Traylor of Enloe—80. Gloomy prospects. Too much rain.

T. K. Ray of Indian Gap—50. Bees in 3 places, 1, 3 and 7 miles from home. Took less than 100 sections. Prospects better, as cotton is coming in.

T. P. Robinson of Bartlett—180. Two yards. Hives 6 feet apart. Some nuclei. Excellent honey-flow.

Miss Meta Hillje of Alvin—4. Flow just commenced, and favorable.

W. C. Lanford of Whittville—30. Have done no good. Prospects better. Cotton blooming. Has several kinds of bees.

Willie Atchley of Beeville—1,100. Poor flow and poor prospects.

Huber Laws of Beeville—12. 250 pounds of honey. Prospects poor.

Louis H. Scholl of College Station—240. Five apiaries in different parts of the State. Too wet in early spring, and too dry later. Everything burned up. Then floods in Brazos bottoms. Poor prospects, but a good flow from cotton now.

J. F. Teel of Van Alstyne—175.

J. B. Salyer of Jonah—150.

Z. S. Weaver of Courtney—275.

G. W. Cantrall of Uvalde—130.

W. H. Laws of Beeville—1,400. 900 colonies private, and 500 in partnership. Honey season past. Too much rain. Poorest season in years.

W. H. Madely of Rogers—200. 1,900 pounds of extracted and 600 pounds of comb honey taken. 3,000 pounds on hives. Still storing honey from cotton.

E. Blechschmidt of Knippa—120. Ten 120-pound cases of comb honey taken. Splendid prospects.

W. A. Breeding of Beeville—100. Bees in very good condition, and some honey on hives.

D. C. Milam of Uvalde—600. 24,000 pounds of honey. One-third extracted, the rest comb honey. Prospects good for fall flow.

W. C. Conrads of New Braunfels—85. 40 pounds average per colony. Prospects poor for the fall.

W. H. Sessions of Rice—12.

Udo Toepperwein of San Antonio—800. All in good shape, but not much honey. 9,000 pounds. Very good prospects.

W. O. Victor of Hondo—100. Sixty 120-pound cases of honey. 400 queen-rearing nuclei. Prospects uncertain.

Sam Madely of Navasota—110. One barrel of extracted and 350 pounds of comb honey taken; more to take. Prospects very good.

C. A. Butts of Normanna—350. 3,000 pounds of honey. No prospects.

J. W. Holland of Rice—12.

H. D. Simmons of Hutto—160. 60 pounds per colony. Good prospects with cotton and other yielders.

R. V. Sauer of Brackettville—110. 2,000 pounds of honey. Good prospects.

W. H. White of Blossom—60. Prospects gloomy. Too much rain.

Hugo Sattler of New Braunfels—95. 40 pounds of extracted honey on an average. Very good prospects.

J. W. Pharr of Berclair—60. No prospects. Bees in good condition.

M. P. Hill of Berclair—70. 1,300 pounds of honey—100 sections. No prospects.

L. W. Bell of Beeville—500. Very good prospects.

LOUIS H. SCHOLL, *Secretary*.

Honey as a Health-Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food", written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey". It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey the more honey they will buy.

PRICES, prepaid—Sample copy for a two-cent stamp; 50 copies for 70 cts.; 100 for $1.25: 250 for $2.25; 500 for $4.00; or 1000 for $7.50. Your business card printed *free* at the bottom of the front page on all orders for 100 or more copies. Send all orders to the office of the American Bee Journal.

Mr. Hasty's Afterthoughts

The "Old Reliable" as seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

TANGING OF BEES AT SWARMING-TIME.

We should let up now on Prof. Bigelow as to the tanging question. He's all right now, whatever he may have felt about it at one time. He expressly disclaims advocating the old practice—and is not that abundantly sufficient? There is plenty of room for the like of Prof. Bigelow. We should joyfully make room for more of them if we could get them—men that care almost nothing for crops of honey, but are boiling over with interest to find out what are the absolute facts in regard to that lovable, hate-able, wonderful, biology-explaining, paradoxical, wise, fooling, tantalizing creature—the Honey-Bee.

After all, our main spite against tanging is that it has become a sort of badge to distinguish between those who know something about bees and those who don't know a thing yet as they ought to know. Tanging is felt to be like shouting with a megaphone. We are all fools at this ranch. But of course the pure scientist would like scientifically to *know* whether an unearthly racket does have any power to confuse bees, and make them yield to man's wishes when they otherwise would not. I confess I am not able to tell him. I incline to think the affirmative is true *to a certain very small extent.* It's certain the influence is not great—not nearly enough to pay the keeper of a big apiary in swarming-time for spending intensely valuable time at beating a pan. Popular faith in it largely owing to the fact that *time seems shorter* when we are skipping around doing something jolly than when we are just doing nothing, and waiting in a distressed tension of mind. There seems to be no way to settle it scientifically except to observe and record concerning thousands of swarms with tanging and thousands of swarms without, and then figure out the shaving of difference. Such a process reminds one of the process by which astronomers prove toward what point in space the sun is moving. That's important—and our question here is so unimportant that so far no competent person has felt like spending the enormous amount of time required. Page 790.

HEADING OFF SWARMING IN IDAHO.

So a brother in Idaho, whose name we know not, runs bees on extra-large frames, and 13 of them in a hive, hoping to head off swarming; but still they will swarm sometimes. Make a note of it. One suspects that the wording has got wrong somehow where Mr. Atwater says he produces comb honey in 8-frame hives kept one-story at all times. Page 791.

NATURAL CONDITIONS IN THE FALL.

Thanks to C. P. Dadant for his defense of natural conditions in fall in preference to having all combs completely solid with honey.

Too young bees eat themselves into diarrhea on a long trip, eh? That is quite comprehensible. Thanks. Page 791.

TWO QUEENS IN A HIVE—HIVING HIGH SWARMS.

The evidence given by A. F. Foote, that a big double swarm kept both their queens for 20 days is rather opinion than evidence, as 20 days is plenty of time to rear a young queen. With my bees such swarms are pretty apt to kill all their queens. Even when they go to work and store honey like everything they turn up queenless in the end.

And Mr. F. suspects that when conditions are such that sections are not joined to the bottom-bar bees would sometimes bob them off in the same way (as nearly as possible) with a bottom starter there all right. I think he is correct in that—that is, for *some* of the sections, not for as many as otherwise would be finished with a bee-space clear across the bottom. And the Foote improvement of the swarm-taking box and pole is noteworthy. Fix the pole to be stationary, and run the box up and down by a cord and pulley. Good—if you succeed at all with that style of doings. Some brethren (of which I am one) vote the whole scheme a failure and a nuisance. Who wants to waste time hiving a *part of a swarm?* Bees so fanatically attached to their chosen spot that a large fraction of them refuse to be wheeled away from it. Page 791.

WHITE ASSOCIATION MEMBERS IN TEXAS.

So the Texas B.-K. Association thinks it worth while to ordain that members must be white persons. Wonder if they ever suffered, or were in danger of suffering, from persons not white getting too thick. Page 792.

MISS WILSON AND BUTTER-MAKING.

And Miss Wilson tried if she could make a little dab of cream come butter by agitating it in an ice-cream freezer. Enterprising. And we care enough about our department conductors to like to get side views of their personality. Many big churns in common use (those depending mainly upon the gravity of the cream to do the agitating) strike me as sadly and needlessly helpless when cream takes a notion to say, "I won't!" as it often does. "Any old thing" of a churn is tip top when cream in dutiful mood says, "I will." Page 795.

Canadian Beedom

Conducted by MORLEY PETTIT, Villa Nova, Ont.

Be Prepared for Next Bee-Season.

It is a common misconception among those outside the profession that bee-keepers have nothing to do through the winter months. Even many bee-men themselves look forward to the time when the bees are winter-packed, with the idea of being free from all care with regard to them. A summer occupation it is to them. Well, there is something in it. Bees do not require to be fed night and morning, and tended like other stock on the farm, but they need attention, nevertheless.

In the cellar the ventilation requires a certain amount of attention to regulate for changes of temperature. The dead bees require to be cleaned from the hive-entrances, and the floor swept up occasionally. Outside, snow must be cleared from the entrances, and, if possible, covers removed on bright, sunny days to let the packing dry out. All, of course, with as little disturbance to the bees as possible.

But this is a small part of the work. The man who would make the most of the short summer season will make all possible preparations before that time comes. There are certain supplies required to be got ready each year, and they should be provided for as soon as possible after the close of the honey-flow. At that time all is fresh in the mind, and it is much easier to decide on what is required than it will be later. The apiarist knows best then how much of his time the bees have taken, and can form the best idea of how much increase, if any, he desires to make the following season. He can make out his list of requirements—hives to accommodate the required increase; extra supers, if needed (every hive should be allowed at least two supers); frames, sections, foundation, etc.

Increase can be made most profitably by nuclei and ripe cells or queens. At the present price of queens I would advise the specialist honey-producer to patronize the specialist queen-breeder. Of course, there is always some risk of their being damaged in the mail, and on this account, largely, we use good, ripe cells in forming nuclei whenever they turn up in the course of our examinations for swarming impulse; but we find very little time, indeed, for queen-rearing. Queens ordered in quantities can generally be secured at reduced rates, and they should be ordered *now*, to insure their delivery when wanted. The order should be so arranged that a few will come each week, on a certain day of the week, during the swarming season.

Objection is made to investing money in supplies which may not be needed this year. This can not be avoided without running the much more grave risk of seeing the hives overcrowded with honey, the bees idle and swarming, and no supplies ready. We always make it a point to be ready for the worst—I should say, the *best*. Figure on wintering all the bees we have put into winter quarters, and securing the highest average yield of honey we have ever had. Then buy supplies accordingly.

There are always some cans and barrels left over at the end of the season, but they are good stock for another year. Plenty of storage is the great essential. As far as possible let this storage be the packages in which the honey is to be sold. Don't count on keeping honey in milk-cans and crocks, to be laboriously dug out and melted up before selling. Arrange to run the honey directly from the extractor through a strainer into the package in which it is to be sold.

Another point in preparedness, which very many bee-keepers are prone to neglect, is in the matter of reading. The bee-papers have been coming regularly through the busy season, hastily glanced over, and laid away, with a promise to read them more carefully in winter. It is winter now. What about those bee-papers?

I knew a farmer once who was a great student. He read early and late on science, history, philosophy, until he came to be considered an oracle by his neighbors, and to the outside world a recognized authority on many subjects outside of *farming*. I would rather be well versed in the line of business from which comes my daily bread.

Possibility of Dark Honey or Sugar Syrup in the Brood-Chamber Going into Sections

"York County Bee-Keeper" hits the nail fairly on the head in the following, taken from the Canadian Bee Journal:

"At present quite a controversy is going on over the line relative to the practice of feeding sugar syrup. Mr. Boardman practices feeding just previous to the clover-flow, so that the brood-chamber will be full and all clover honey go into the supers. In a late issue in the American Bee Journal, Editor York advises bee-keepers to make their hives heavy for winter by leaving plenty of sealed combs of dark honey, arguing that the dark honey thus placed will really be equal next season, pound for pound, with light honey.

"Commenting on this, Editor Hutchinson, in the Review, asks bee-keepers to see how much of this dark honey will go into the sections, intimating, of course, that there is not much likelihood of dark honey, or sugar syrup either, going into the supers. Seems to me Mr. Hutchinson is treading on dangerous ground, for surely any practical apiarist knows that if a brood-chamber is full of any kind of honey or syrup (provided the colony has a prolific queen and swarming does not take place), quite a large percentage of this honey or syrup will find its way into the surplus apartments. This is something that any one can test for himself, and if the novice has colonies to go into the clover-flow with the brood-chamber full of buckwheat honey, he may decide that while experience, if a good teacher, it is sometimes a little expensive."

Bees and Alsike Clover

The Hon. Nelson Monteith, Minister of Agriculture, is a bee-keeper. Being a fruit-grower, and seeing the importance of bees to fruit, he became a bee-enthusiast on that account. As to their importance to alsike and buckwheat, the evidence keeps piling up. A few years ago a man came 4 miles to me to have me put bees on his farm for his alsike. He gave a free house for extracting, and board for the men while working at the bees. In the fall he had a good crop of alsike seed, and we had a good crop of honey.

Mr. J. L. Byer, in the Farmers' Advocate, gives *his* experience thus:

"In addition to growing quite an acreage of alsike clover each year ourselves, we also handle considerable seed for a well-known Toronto firm. Coupling this with our interest in the business from a bee-keeper's view, I suppose there is no exaggeration when I say that we practically know the acreage and individual yields of the different fields of clover within a radius of 3 miles of us each year. In seasons that the acreage is limited, there does not appear to be so much difference in yields, as far as distance from the apiaries is concerned; accounted for, no doubt, by the fact that when pasture is scarce the bees forage over a much greater extent of territory in search of nectar. On the other hand, in seasons when there is a large acreage, the yields invariably decrease, after a distance of a mile or more is reached.

"While yields of 7 and 8 bushels to the acre are not uncommon in fields near the bees, we have yet to hear of such turnouts of clover any considerable distance from the apiaries. For 7 years our clover has yielded from 6 to 9 bushels to the acre; our nearest neighbors have done about the same. Others living 1½ miles and more from any bees, have had in the same years from 2 to 5 bushels to the acre. As the soil is practically the same in both cases, same methods of culture practiced, etc., I am at a loss to explain the difference, if the bees are left out of the question. These statements will be vouched for by nine out of every ten farmers growing alsike. In fact, I could name men who 10 years ago would laugh at the idea of the bee as something necessary in alsike-growing, who to-day are the most anxious to have bees near their clover-fields. One in particular comes to my mind, who, 2 years ago, offered to haul an apiary from 15 miles away to his place, so that he could have the benefit of them when his clover was in bloom.

"Just a short time ago, while in conversation with that well-known agriculturist, Mr. Simpson Rennie, of Toronto, I remarked that the beet-sugar industry would not prove very tempting to the farmers who are growing alsike. He said, 'We can't all grow alsike; we haven't got the bees.' He was very emphatic about the matter, and stated that neighbors of his had tried again and again to grow alsike for seed, and had always failed. In the section referred to there are probably not half a dozen colonies of bees in the neighborhood. Surely, the testimony of such men should bear some weight.

"Last, but not least, the opinion of the large seed firms should be considered. As they annually handle thousands of bushels of the seed, they should know what they are talking about. I think, without exception, they will say they get the most seed, and of the best quality, from growers who are in close proximity to bees."

Our Sister Bee-Keepers

Conducted by Emma M. Wilson, Marengo, Ill.

A Hearty Holiday Greeting

to all and singular of the cherished sisterhood. May your Christmas turkey be just the right shade of brown, and may your pies not run over in the oven. May your bees winter successfully, and may you have a good time expecting a big crop of honey next year—whether it comes or not.

To the many who have helped during the past year, by their contributions and by their kind words of encouragement, sincere thanks are due, and are hereby given. Closely coupled with the feeling of thankfulness for the favors of the past is the Oliver Twist feeling of a desire for "more." Perhaps the most interesting hour of the day, "in this locality," is about 9 o'clock in the morning, at which hour the rural delivery man comes along, and when the day's budget is brought into the house the first question always asked by a certain person is, "Anything for me from the sisters?" If any of the sisters are at all solictous for the happiness of that "certain person," they can make sure to increase it by letting her hear from them often.

Don't wait for some great thing to tell; tell us about the little things. Tell us of your successes, and, equally, tell us of your failures. If you haven't a pen handy, use a pencil. Never mind if you don't know just where to put the commas and other marks—they're good at that sort of thing in Chicago.

Postals and postscripts permitted.

Success to all of you. Emma M. Wilson.

For Our Consolation and Encouragement

Dear Miss Wilson:—I send a short poem written by a dear friend of mine, whose life is a living epistle of the love of Christ. She signs herself "Sister Ruth." (Not her real name.) It seems to me that some of us bee-keepers may be consoled by reading this poem. So many of us fail of the prosperity and success we had worked and hoped for. As I see in the American Bee Journal, from time to time, poems on other subjects than bee-keeping, I would be pleased if you would have this poem published in the Sisters' corner. Sarah E. Wiley.

Poughkeepsie, N. Y.

Blessed are Ye That Fail

Sometimes I've wished we might these words enroll
Upon the pages of God's Holy Book,
Then, kneeling down by each discouraged soul,
Could simply point to them and whisper, "Look!
'Blessed are ye that fail.'"

For none fail unless they first have striven;
'Tis he who toils all night, and naught doth take,
Whose heart with dark despair is keenly riven;
And so I wish 'twas written for his sake—
"Blessed are ye that fail."

Is it not written? Not these words we find,
But surely in God's Book we read the thought—
He treasures up the motives of the mind,
And blesses as the will within us wrought,
Tho' outwardly we fail.

Christ came to heal our broken-heartedness;
And who so sore as he who toils in vain?
Whose best endeavors seldom meet success,
E'en tho' he try, and try, and try again?
Then blessed ye that fail.

Aye, blessed, for the very striving leads
The zealous soul into the realm of loss,
Made holy by the One whose loving deeds
Seemed to have ended on the cruel cross.
Aye, blessed ye that fail!

God is too wise to let us oft succeed,
For then we would not keep our lowly place,
And so He lets us feel our constant need
Of His supplies of patience and of grace—
Thus blessing those who fail.

Then, weary one, look not upon the main,
And mourn the wreck of all your toil and care;
If yet upon some broken piece you gain
The haven safely, and are welcomed there,
Blessed are ye that fail.

Sister Ruth.

Bee-Keeping and Other Things at "Clovernook"

Dear Bee-Keeping Sisters:—So our good Chieftainess thinks you will be interested in hearing some more about "Clovernook," in addition to the clipping she printed recently from that fine magazine, Suburban Life.

Well, we began business with some 50 colonies, and a fine outfit for extracted honey, and a nice, large, roomy bee-house, all of which was on the place, and later on we bought from the proceeds of our honey.

At first the colonies dwindled to 31, but by experience (rapidly acquired in a fiery furnace of stings and disappointments) I promptly and speedily ran them up to 80 colonies, the present limit of our pasturage, and we work each year to keep the apiary at about that average.

I have always believed our bees were the very backbone and sinew whereby Clovernook has succeeded in building up a lucrative plant, even *if* through many difficulties. And I must confess that after having had considerable experience in ducks, chickens, turkeys and squabs, besides fruit-raising, during the 10 years' work here, surely bees are away and ahead my most satisfactory branch, from every standpoint but one.

I can't make a living from my 80 home colonies, and I can't add out-lying yards to the plant, for there is no way of visiting them. I'm afraid of breaking my neck in learning to use a bicycle, though in days of yore how I used to ride horses, and skate and dance! During those times a broken neck never bothered me; but when one knows what it would mean to a little, aged mother, I tell you it makes a difference.

I've had three horses—two were ruined, and one I sold to keep her from being ruined, and when she went a vow was mentally registered that Clovernook would never shelter another till time evolved for us as something masculine in hired help that was reliable. Suffice to say this *rara avis* is still "on the wing;" he surely has not yet settled down on Clovernook.

Such being the state of affairs with us, something else had to be added to bees if we were to live independently, and "tuck away" some odd pennies in the "Emergency Stocking." And so, after a brief, exciting, hard trial of "chickens and squabs for broilers," we've settled down now in peace to my bees and duck-raising—with, as a side-issue, about 100 White Wyandotte hens and 8 White Holland turkeys for eggs and breeding stock; though, to be sure, there are a few other odds and ends by which we pick up a few extra pennies. For instance, our apples brought us this fall $36 in cash, besides having all we could use; from our currant patch we *cleared* on the jelly about $100. Of course, we have lovely down from the ducks, netting us about $100 per season, and the guano that brings $1 per load. And from the bees, the vinegar and beeswax.

I hope I have demonstrated clearly that it was not by preference that I resigned confining myself strictly to bee-keeping, and why forced by circumstances into the very much more complex paths of poultry-raising. I will, however, in defense of the last, say this: Besides our living expenses and lots spent in general repairs and improvements, there is invested in houses, incubators, brooders, and other poultry appliances, some $2000, all of which we have raised right here, ourselves. Also, that to-day, with two good helpers, Clovernook can yield us annually between $2000 and $4000. We are now equipped for it, and can do it.

Realizing my own limitations, and that there must be others scattered through our land who suffer from similar restrictions, is the reason why I urge that for those, bee-keeping in connection with another rural occupation, may work very successfully in the production of a fair income and independent livelihood.

The little cut at the head of this shows my bee-house, with a lovely good friend and brother standing in the doorway, and my man "Pete," with his 'barrow and tin carrier filled with combs, starting for the bee-yard. That white splotch between the hives is a flock of my ducks. They refused to "spread out" and have their pictures taken nice, but just "bunched up together" and made themselves disagreeable. "F. E. W.," yours truly, stands at one side equipped for business, with straw hat, bee-veil, big apron, and bee-smoker.

Some time you shall have a picture of my dear ducks, a good one, if it will be allowed in a bee-paper, and I will describe our indoor rigging of the bee-house; but guess you have had enough of Clovernook for this time.

Clinton Co., N. Y. FRANCES E. WHEELER.

Doctor Miller's Question-Box

Send questions either to the office of the American Bee Journal, or to DR. C. C. MILLER, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Bees Dying Seemingly Without Cause

I went to one of my out-yards of 303 colonies the last week of October, and all were in fine condition, with lots of old stores, and the woods all turning white with aguinaldo and various other good honey-producing flowers. So I pitched in, and in a few days I put on 185 supers; then my business called me in other apiaries, and it was 4 days before I went back to put on some more supers, and to my surprise I found the bees carrying out other bees and killing them after getting them out. So I thought I would wait and see how this would turn out. Three days later I went back and found the whole apiary still at the killing, and dead bees from ½ inch to 2 inches deep in front of the long rows of hives, and the bees that remained alive seemed so scarce in November that they have suspended business in the way of storing honey. Some of these same hives had lots of bees hanging out in front and at the bottom when this trouble began, and now I can't see one pass out or in oftener than one or two a minute. It can't be on account of hunger, for they are all quite heavy, and with lots of good, healthy brood, which I fear may get chilled if we should have a cool night.

In my home yard of 225 colonies, only 2½ miles from the fatal yard, I never saw bees do better. I also have another yard of 400 colonies about 6 miles from the fatal one, and they are doing well, too. Can you point out a remedy or a preventive if I should have any more of this kind of trouble? As I have told you in a previous letter, I have handled bees for many years, and this is a new wrinkle to me.

Our weather is quite favorable (Nov. 30), and our prospects are flattering for lots of honey this season.

CUBA.

ANSWER.—I don't know enough to make even a guess at the cause or cure, so submit the case to "the constituency," begging that any one able to help out will be kind enough to do so.

Late Gathering of Honey and Pollen

About Oct. 1, I found a small swarm of bees on a bush. I took pity on them and put them in an old hive on 3 *empty* frames, and put some old boxes of honey in the bottom, then closed the entrance all but a bee-space.

In about a week I looked at them and they were building comb, and, to help them out, I put in 5 *full* frames of capped honey, practically every cell full. I soon discovered that they were gathering pollen every pleasant day, and they are still at it, although we have had one snow-storm and several freezes. The pollen is bright orange in color, and tastes like the pure stuff.

1. Where do they get it?
2. Why do they gather it so late, when not another colony in my yard does?

Last Wednesday (Nov. 22) the bees were coming in loaded, and working hard. It rained hard all day yesterday, but it has cleared up again, and I shall watch them close, and see just how late they will bring it in. They have brood, eggs, and larvæ in all stages. I have a good cellar all ready for my bees, and shall put them in as soon as it seems necessary. Bees here have all been breeding so late that they must be in fine condition for winter, and we look for good results next year. Our surplus was pretty light this year. IOWA.

ANSWERS.—1. I don't know. More than that, I don't know where my own bees get pollen so late in the season that there is no longer anything in bloom that I know of, but of course something is in bloom, for there's no question as to the loads of pollen. I must modify that statement enough to say that I do know of one thing that has not ceased to bloom from early spring, and is still showing blooms more or less imperfect in December—dandelion. The late pollen carried in by the bees, however, doesn't look exactly like dandelion, yet the lateness of the season may account for a little difference in color.

2. It is not improbable that the combs you gave them contained no pollen. Your other colonies have a good stock of pollen on hand, and feel no great need to hustle for more, but this colony, if it is without pollen, is in a somewhat desperate condition, for without pollen no brood can be reared either fall or spring. Having a fanatic desire for pollen, no wonder they skirmish around lively for it when other colonies show little care for it.

Making Candy for Winter Feeding

What is the best way to make candy? I have fed syrup, but did not get it done until late, and I am afraid the bees will be short of stores before spring. I winter them in the cellar. IOWA.

ANSWER.—You will not be far out of the way if you make it just as you would make any candy for the children, only you must be more careful about scorching it, for although burnt candy doesn't hurt children seriously, it means death to bees if given for winter stores. For every 3 pounds of sugar take a pint of water. When the water is boiling hot, sift in the sugar slowly, stirring it as you sift it in, so it will not burn on the bottom before it is dissolved. Try it from time to time, and as soon as a little of it dropped into cold water becomes brittle, take off and pour into greased dishes, making cakes ¼ to 1 inch thick.

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☞J.G. Goodner, of this State, writes me that he "prefers to pay $25 for a Rietsche Press than do without it."—A. G.

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Reports and Experiences

Bees in the Cellar

I put my bees into the cellar Oct. 28, but it warmed up again, so I think I made a mistake by putting them in so early. I had 65 colonies, spring count, and got about 2000 pounds of honey from them. We have about a foot of snow here now. CHAS. J. MILLER.

Long Prairie, Minn., Dec. 2.

Results of the Past Season

I have put 63 colonies into winter quarters. They did fairly well the past season, as I got 3500 pounds of honey from them. I run for comb honey only. I don't lose very many colonies in winter, as I winter them on the summer stands packed with chaff cushions, and have a row of evergreen-trees on three sides to protect them from the cold winds, and it works very nicely. EDW. McCOY.

Lima, N. Y., Dec. 8.

Bees Did Poorly

Bees did not do well here this year. There was no horsemint in the spring, nor broomweed in the fall—nothing but cotton to work on; while this was a fine quality of honey, it amounted to only about 35 pounds per colony, on an average (two-thirds comb). This country is nearly all under cultivation, consequently cotton is our main honey-plant. I came out in the spring with 35 colonies, hived 18 prime swarms, and now have 31. I lost heavily in early summer.

I sold what honey I had to spare for 10 cents per section, and 75 cents per gallon for extracted. One thing is strange to me, if I were to ask $1.00 a gallon for honey I don't believe I could sell a single gallon; but after I sold what I had to the merchants here, they had no trouble in getting $1.25 and $1.50 per gallon for it. F. R. KNAUTH.

Granger, Tex., Dec. 4.

Bee-Keeping in the South

I will try to say something relative to apiculture in the South. I can not understand, except in a meager way, what bee-keepers in the North mean by "wintering bees." I have been told that it is very cold there, that you have snow and ice, and that you have to protect your bees in order that they may live through, and then many are lost, and you have "spring counts." I don't know what this means. I never saw but one snow in my life of any importance, and it was 4 inches deep on a level, and lasted one day. The thermometer showed 12 degrees above zero. Half the winters here the mercury never reaches as low as 12 degrees. I have seen several winters where the mercury never fell below 28 degrees. Three times in my life I have eaten watermelons on Christmas, and once I consumed one in February of the previous year's crop. Isn't this delightful for the apiarist?

Twice in my life I have seen the mercury as low as 2 degrees above zero. I had on so much covering that I could not turn over, and still froze on the edges. I had to cover up my head to save my nose. When I arose the next morning I "smoked" all over like a leaky stove, and my knees quaked like a bone-yard. I thought that I never would get into my pants, and when I did they seemed to be entirely too thin, much more so than usual. This was fearful on me, but never seemed to bother my bees. I beg pardon for the above digression.

Here in Texas we leave our hives just as they were when we last "robbed" them; at least I do. I extract out the last honey the last of October, or by Nov. 15, and return the combs to the hives just the same as if I were expecting another honey-flow. No further attention is paid to the bees except to walk through the yard occasionally to see if none of the covers have blown off.

The bees bring in pollen every month in the year. I have seen them toddling in rapidly on Christmas day, ladened with pollen. I never made any investigations to see whether or not they brought in any honey. Cotton and mesquite are my principal honey-bearing plants here in Bell Co., Texas, and from them we get enormous yields, sometimes.

As yet I never have had any disease among my bees except paralysis, and that not serious; and I have operated bees 20 years. From what I can learn, foul brood is practically unknown in the State. It is honey here with practically no labor attached. Last year (1904) I put in 26 days' work, all told, for operating and "robbing," and hired one hand two days, and took off over 9000 pounds of honey. Nearly half this time was consumed in transferring a few colonies and straightening combs and building up weak colonies, the weak ones being those that I had found. We have as many colonies in the spring as we do in the fall—never lose one except through failure of the queen. T. P. ROBINSON.

Bartlett, Texas.

Imbedding Wires in Comb Foundation by Heat

MR. EDITOR:—While thanking Mr. Adrian Getaz for his desire to credit me with the invention of the plan of imbedding wires in foundation by the use of heat, I must disclaim all right to such credit. The credit belongs to one of the sisters, Miss Emma M. Wilson, who first conceived the idea of using a lamp or gasoline stove to heat the wires. Then I think it was The A. I. Root Co. who varied the plan by using electricity. Not every one can conveniently use electricity, but a gasoline stove, oil stove, or a lamp, is easily accessible.

The illustration on page 842, shows an improvement that I suppose is the invention of Mr. Getaz—having the frame supported by wires suspended from above. That's easier than to hold the frame in the hand, and the proper distance from the lamp is thus automatically gauged.

One who has never tried it may think that there is danger of spoiling the foundation by melting it. As a matter of fact the heat of the lamp has very little effect on the wax, and it would work just as well if no direct heat touched the wax. Remember that the wire is under the wax. The wire is one of the very best conductors of heat, wax one of the poorest. So the wire becomes heated immediately, and a slight pressure from above melts its way into the wax before any other part of the wax has found out that any heat is present. C. C. MILLER.

Marengo, Ill.

Farm and Stock is an illustrated monthly magazine in the interest of CORN BREEDING, Cultivation and Live Stock. Price $1 a year, but for a short time will be sent a year on trial for 10c and names of ten farmers who grow corn.

Farm & Stock, 228 Charles, St. Joseph, Mo.

Mention Bee Journal when writing.

85c for 15 NAMES For names and P. O. of 15 farmers and 15c—stamps taken—we will send for 2 yrs. the Farmer's Call—reg. sub. price 50c a year. F. C. is a wkly., 25 yrs. old, 1,300 pages a yr. Sample free. Farmer's Call, Quincy, Ill.

Mention Bee Journal when writing.

"It is continuous advertising that impresses the public with the stability of a firm."

BANTA Incubators & Brooders

Backed by 14 Years of Successful Use by poultrymen all over the world. No guesswork. They are automatic in regulation and ventilation. Fully guaranteed to give YOU satisfaction. Send for free book. BANTA - BENDER MFG. CO., Dept. 24, Ligonier, Ind.

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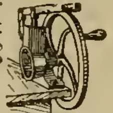
EGG MAKING

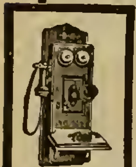


is a hen's natural work. Cut bone is the raw material she needs to make her lay an egg a day. A CROWN BONE CUTTER will prepare the food from scrap bones quickly, easily. Write for catalog—tells about the Crown. Wilson Bros., Box 618, Easton, Pa.

Mention Bee Journal when writing.

How to Organize

A Farmers' Telephone Co.



We have published a very instructive telephone book especially for the man who wants to know ALL about telephone matters. It tells how to organize, how to build the lines; about different types of 'phones, construction; gives by-laws, and constitutions; in fact it is a telephone encyclopedia every farmer should have. We send it free if you mention this paper. Ask for Book 80C, "How the Telephone Helps the Farmer." You will get it by return mail. Address nearest office.

Stromberg-Carlson Tel. Mfg. Co.
Rochester, N. Y.—Chicago, Ill.

Mention Bee Journal when writing.

Special Sale on
HIVES AND SECTIONS

Until March 15. Dovetail Hives, 8-frame, 1½-story, 1 25; 10-frame, $1.40; No. 1 bee-way Sections, 3.90; No. 2, $3.40; 24-lb. Shipping-Cases, 13c; Foundation, Smokers, etc., cheap. Send for 24-page Catalog free.

W. D. SOPER,
Rural Route 3, JACKSON, MICH.

43Dtf Please mention the Bee Journal.

GET A DANDY

THE DANDY BONE CUTTER

will double your egg yield. Thousands of poultry raisers say so. It costs less, turns easier, cuts faster and lasts longer than any other. Price $5.00 up. Sold on 15 Days' Free Trial. Send for book and special proposition.

STRATTON MF'G. CO.,
Box 21, Erie, Pa.

Mention Bee Journal when writing.

The Best Fruit Paper

is The Fruit-Grower, published monthly at St. Joseph, Mo. The regular subscription price is a dollar a year but if you will write for free sample copy and mention this paper, you will receive a proposition whereby you may secure it one year WITHOUT COST. Every one who has a few fruit trees or a garden, should read

THE FRUIT-GROWER
ST. JOSEPH, MISSOURI

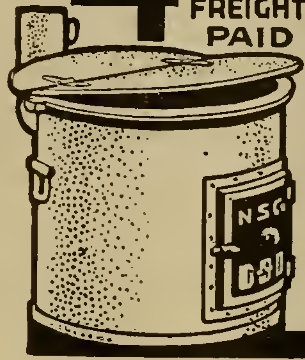
Every issue is handsomely illustrated and from 32 to 64 pages a month are filled with interesting matter pertaining to fruit-growing and gardening. The first four issues of 1906 will be handsome special numbers devoted to the following subjects: January, The Horticultural Societies; February, Spraying; March, Gardening; April, Small Fruits. Any one of these numbers will be worth a dollar to you. We publish the "Brother Jonathan Series" of fruit books. Send your name and learn how to secure these books free.

TRADE MARK
BRO. JONATHAN

Fruit-Grower Co., 107 S. 7th, St. Joseph, Mo.

$4.60 FOR THIS "ECONOMY" BOILER AND FEED COOKER

FREIGHT PAID



The "Economy" Feed Cooker is the best built cooker on the market today. It is constructed so as to get the very best results from the smallest amount of fuel possible. The kettle is well and strongly made of the smoothest cast iron, and has a handle on each side so that it can be removed from the casing instantly. Will last a lifetime. The casing, or jacket, is one continuous sheet of cold rolled boiler steel, supported at the bottom by a heavy wrought iron band. This cooker has the largest fire door of any made, and is the strongest, most serviceable feed cooker ever sold at such a price, freight paid. Made in seven sizes to suit every need; furnished with hinged cover, elbow and one length of pipe with damper. We guarantee this cooker for one year. Send money with order today, or write for our large 1,000-page catalogue giving other sizes and thousands of money-saving bargains for the farmer and his family.

If you want to save 10 per cent on everything you buy, we have a plan you should know about; it will save you from $150 to $250 a year. Only costs a stamp to find out all about it.

The object of this Society is to save money for its members. For full information let us tell you how we do it.

Co-Operative Society of the National Supply Co.
Lansing, Michigan Chicago, Illinois

All About **California**

The Pacific Rural Press has been a household word throughout California for 35 years. It is authority on all matters regarding the soil or products of California. Weekly, illustrated: Edited by practical specialists. Two Dollars per year. Send for sample copy.

Pacific Rural Press,
330 Market Street, SAN FRANCISCO, CALIF.

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4 Largest Sizes Soot Burning

Never Go Out
And last from 5 to 21 years

BINGHAM
Original
Direct Draft
CLEAN
Bee Smokers

Pat'd 1878, '82, '92 & 1903

Tin 4-in. Smoke Engine 3½-inch 3-inch 2½-inch 2-inch Wonder
$1.50. $1.10. $1.00. 90c. 65c—per mail.

Sent on receipt of price per mail.

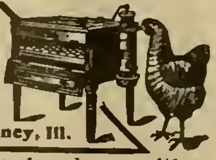
T. F. BINGHAM Farwell, Mich.

OTISVILLE, PA., Jan. 18, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine. FRED FODNER.

Mention Bee Journal when writing.

$12.80 For 200 Egg INCUBATOR



Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day

GEO. H. STAHL, Quincy, Ill.

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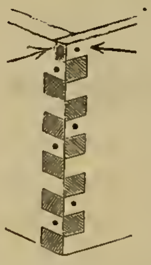
WE SELL ROOT'S GOODS IN MICHIGAN

Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.

M. H. HUNT & SON,
BELL BRANCH, WAYNE CO., MICH



THIS IS THE LOCK

corner that we have told you about, and as you will see it can't warp nor split off as it passes by and nails firm to the side. Prices right—quality right—workmanship right.

Our discount discounts everything. Postal gets a circular.

The Wood Bee-Hive & Box Co.
LANSING, MICH.

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THE COUNTRY GENTLEMAN

ESTABLISHED 1831

The ONLY Agricultural NEWSpaper,

AND ADMITTEDLY THE

Leading Agricultural Journal of the World.

Every department written by specialists, the highest authorities in their respective lines.

No other paper pretends to compare with it in qualifications of editorial staff.

Gives the agricultural NEWS with a degree of completeness not even attempted by others.

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WHO WISH TO
KEEP UP WITH THE TIMES.

Single Subscription, $1.50;
Two Subscriptions, $2.50;
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SPECIAL INDUCEMENTS to RAISERS OF LARGER CLUBS.

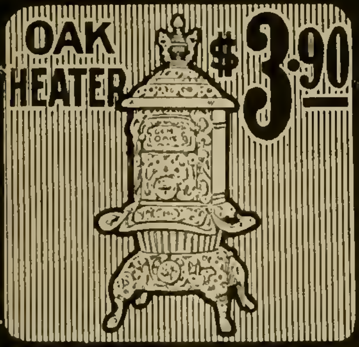
Four Months' Trial Trip 50 cents.

SPECIMEN COPIES

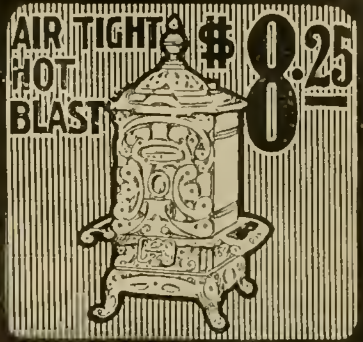
will be mailed free on request. It will pay anybody interested in any way in country life to send for them. Address the publishers:

LUTHER TUCKER & SON,
Albany, N. Y.

Please mention Bee Journal when writing Advertisers.

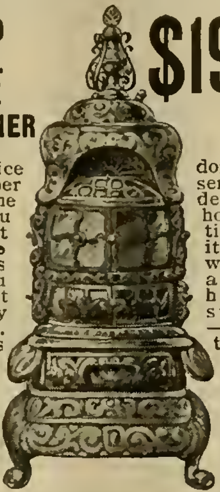


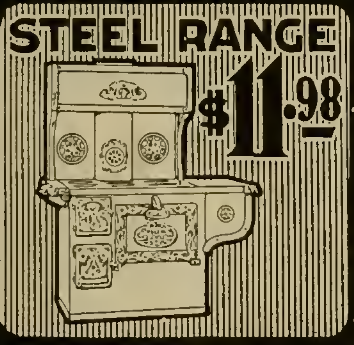
STOVES FREIGHT PAID

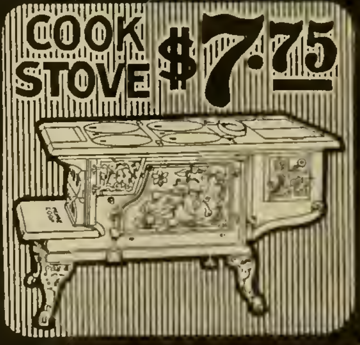


We are the largest stove dealers in this country **selling direct from the foundry to the purchaser FREIGHT PAID.** Our immense stove business is all done by mail, and is built on the solid foundation of **satisfaction or money back** in every case. Every stove we sell is fully warranted and broadly guaranteed, and the purchaser must be satisfied in every particular or the purchase price will be refunded. Before you buy a stove send for our large **free** 1,000 page merchandise catalog. It contains hundreds of **handsome stove bargains** not to be found anywhere else. No matter what sort of a stove you want we have it, and our price **—freight paid—** will lay it down at your depot cheaper than you can buy it from your home dealer, or anyone else. And our guarantee makes you safe. You may order any stove shown in this advertisement or in our large catalog; if it isn't **just as we claim,** ship it back; we will pay freight charges and you won't be out a cent by the deal. Hundreds of farmers have purchased stoves from us and have all been more than pleased with their bargains and recommend us to their neighbors—that's the secret of our rapid growth. You will do the same. When you buy a stove of us you know just what it is going to cost you; you don't have to figure on the freight. You just send the amount of the purchase price and we deliver it to your station,—you simply haul it home. If you don't find a stove in this advertisement that suits you, **send for the catalogue;** it is the greatest buyers' guide published; it will show you an easy way to **save money** on all your household supplies—tells how to make every dollar that you spend do more than double duty.

HARD COAL BASE BURNER







If you want to save $150 to $250 a year, ask us for full particulars about our special money-saving plan—there's 10 per cent off list price on everything you buy by this plan. Write for it today.

Co-Operative Society of the National Supply Co.
Lansing, Mich. Chicago, Ill.

Mention Bee Journal when writing.

87½ Percent Saved

In mortality to those insured in the

TOTAL ABSTINENCE DEPARTMENT

—OF—

Security Mutual Life Insurance Company

EACH POLICY HOLDER is entitled to a Bond issued by the National Total Abstinence League.

YOU may hold a policy and BOND.

General and special agents wanted. Address,

3D28t A. S. RENNIE, Mgr., 614 Marquette Bldg., Chicago, Ill.

Bargain in Bee-Supplies

On account of removing from the city, I wish to sell at once the list of bee-supplies given below. Will sell the lot at less than one-half the present retail prices as shown by Root's catalog. They certainly are a big bargain.

7—8-frame hive-stands
2—8-frame wood-zinc boards
2—Danzenbaker Hive covers
3—Reversible hive-bottoms
9—10-frame dovetailed supers
5—10-frame dovetailed winter-cases
24—8-frame dovetailed supers
9—8-frame dovetailed extracting-supers
2—10-frame dovetailed hives
3—8-frame dovetailed hives
75—M fences
1—Danzenbaker bottom and detachable alighting-board
10—8-frame hive-covers
16—Hoffman top-bars
800—4x5x1⅜ sections (new)
7—Miller feeders
2—8-frame bee-escape boards
25—8-frame hives (new)
25—8-frame 2P supers (new)
500 plain sections (new)

$40 will take the lot if ordered at once.

For further particulars, address, MISS M. A. CALDWELL, Morton Park, Ill.

FRUIT BOOKS FREE

Send your name and address at once and you will receive by return mail sample copies of the BEST FRUIT PAPER and full particulars about the "Bro. Jonathan Fruit Books," which may be secured free.

FRUIT-GROWER COMPANY
912 SOUTH 7TH STREET, ST. JOSEPH, MO.

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Very Low Excursion Rates for Christmas Holidays

to all points on the Nickel Plate Road between Chicago and Buffalo. Dates of sale Dec. 23, 24, 25, 30 and 31, 1905, and Jan. 1, 1906, with limit returning Jan. 3, 1906. Rate one and a third fare for the round-trip. Individual Club Meals ranging in price from 35 cents to $1.00, and Mid-Day Luncheon 50 cents, served in Nickel Plate dining cars; also service a la carte. No excess fare. Chicago city ticket offices, 111 Adams St. and Auditorium Annex. Depot, La Salle and Van Buren Sts. The only depot in Chicago on the Elevated Loop. 40—49A3t

Do You Want a South Dakota Paper?

Tells of great land values, of business opportunities, of a State where more railroad building is going on than in any other State in the Union. **South Dakota Farmer** is issued every week. Price, $1 per year.

SPECIAL OFFER—Send this ad with 35 cents for a year's subscription. Address,
SOUTH DAKOTA FARMER, SiouxFalls, S.D.

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"If Goods are wanted Quick, send to Pouder"

BEE-SUPPLIES

Root's Goods at Root's Prices

Everything used by Bee-Keepers.
POUDER'S HONEY-JARS. Prompt Service.
Low Freight Rates. ∴ ∴ ∴ Catalog Free.

If you wish to purchase finest quality of HONEY for your local trade, write for my free monthly price-list of honey.

Why not secure your BEE-SUPPLIES NOW FOR NEXT SEASON'S USE, and avail yourself of the following very liberal discounts? Goods all Root Quality.

For cash orders before Dec. 1..8 percent | For cash orders before Feb. 1..6 percent
For cash orders before Jan. 1..7 percent | For cash orders before Mar. 1..4 percent
For cash orders before Apr. 1..2 percent

WALTER S. POUDER,
513-515 Massachusetts Ave., INDIANAPOLIS, IND.

Mention Bee Journal when writing.

Wisconsin Basswood Sections
And Prompt Shipments
Is what we are making for our customers.
— DOVETAILED HIVES AND SHIPPING-CASES —
We carry a full line of SUPPLIES. Ask for Catalog.
THE MARSHFIELD MANUFACTURING CO., Marshfield, Wis.

Michigan Distributors
—FOR—
G. B. Lewis Co's BEEWARE
Dadant's Foundation

WITH an enormous stock, and the best shipping point in Michigan, we are in a position to give you the very best service.

SPECIAL.—A quantity of Dovetail and Wisconsin Hives, slightly damaged by water, in packages of 5 at $1.25 per hive for 1½-story 8-frame; 10-frame, $1.40 per hive. Satisfaction guaranteed.

A. G. WOODMAN CO.,
Grand Rapids, Mich.

Advanced Bee-Veil. Cord arrangement, absolutely bee-proof, best on earth. Made of imported French tulle veiling. Cotton, with silk face, 50 cents, postpaid. 49C7t

7 Percent Discount

We will allow you the above Discount on all Orders accompanied by Cash during December. Send for our Catalog.

PAGE & LYON MFG. CO., New London, Wis.

Mention Bee Journal when writing.

FOR SALE HONEY-JARS

The No. 25 Honey-Jar, Porcelain Cover, Metal Screw Cap, absolutely tight, holding One Pound of Honey, Net, in shipping-cases of one gross each:
1 gross lots............$4.50 per gross
5 " " .... 4.00 "
Also in strong RE-SHIPPING CASES of two dozen each, heavy corrugated partitions, sides, top and bottom—a perfect protection—
1 case lots ....$1.00 per case
5 " .... .95 "
10 " .... .90 "
Eight-ounce Tumblers, tin caps, 3 dozen in re-shipping case:
5 case lots, per case, 3 doz........85c
10 " " " 80c
20 " " " 75c
F.O.B. New York. Prompt shipment on receipt of order.
HILDRETH & SEGELKEN,
265 & 267 GREENWICH ST., NEW YORK, N. Y.
11Atf Please mention the Bee Journal.

For Sale—25,000 Lbs. of well-ripened Spanish-needle Extracted Honey put up in new 60-lb. tin cans—6c a pound for the lot, or 6½c for less, F. J. GUNZEL, Weiner, Ark.
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FOR SALE

Until further notice, finest quality new crop California Water-White White Sage and Light Amber HONEY in 60-lb. tins, 2 in a case; new cans and new cases Write for prices and samples, and state quantity you want.
HILDRETH & SEGELKEN
265 & 267 Greenwich Street, NEW YORK, N.Y
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WANTED

Fancy White Comb Honey in Non-Drip Shipping-Cases; also White Clover Honey in cans and barrels. Please send samples and state your lowest price, delivered here. We pay spot cash upon receipt of goods.
GRIGGS BROTHERS
521 Monroe Street. - TOLEDO, OHIO.
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Big Discounts on Bee-Supplies

The following discounts apply on all orders except honey-packages for current use:
For cash orders before Oct. 1—10 percent
Nov. 1...... 9 percent | Feb. 1 ...... 6 percent
Dec. 1 ...... 8 " | March 1.... 4 "
Jan. 1 ...... 7 " | April 1 ...... 2 "
We handle LEWIS' GOODS, and carry a large stock, which insures prompt shipment. Catalog free. Address,
LOUIS HANSSEN'S SONS,
213 & 215 W. 2d Street, DAVENPORT, IOWA
38Atf Please mention the Bee Journal.

DEATH TO LICE.

LICE SAP LIFE
That's how they live and thrive. You can't have healthy, profitable fowls or stock and have lice too.
Lambert's Death to Lice
promptly kills all insect vermin and makes sitting hens comfortable. Sample 10c; 100 oz., $1.00 by express.
O. K. STOCK FOOD CO.,
D. J. Lambert, Vice-Pres.
406 Monon Bldg., Chicago, Ill.

PURE ALFALFA HONEY
IN 60-POUND CANS

We have a good supply of Pure Alfalfa HONEY in 60-pound cans that we can ship by return freight at these prices: 2 cans, boxed, at 8½ cents a pound; 4 or more cans at one time, 8 cents a pound—all f.o.b. Chicago. Cash with order. Sample, by mail, 8 in stamps, to cover package and postage.
Address,
YORK HONEY AND BEE SUPPLY CO.
141-143 Ontario St., CHICAGO, ILL.

Lowest Prices

Big Discount for Early Orders

On Cash Orders

Before November 1.................9 percent
" December 1.....................8 "
" January 1......................7 "
" February 1.....................6 "
" March 1........................4 "
" April 1........................2 "

Bee-Supplies

OF ALL KINDS

Established Nearly 25 Years

We have published THE AMERICAN BEE-KEEPER for 15 years (monthly, 50c a year.) The largest and best illustrated magazine of its kind for the price published. Edited by two of the most experienced bee-keepers in America.

Sample copy free.

Our large, illustrated Price-List of Supplies free on application. Address,

The W. T. Falconer Mfg. Co.
JAMESTOWN, N. Y.

Mention Bee Journal when writing.

Headquarters for Bee-Supplies

ROOT'S GOODS

Complete stock for 1905 now on hand.
Freight rates from Cincinnati are the lowest,

ESPECIALLY FOR THE SOUTH, AS ALL FREIGHT NOW GOES THROUGH CINCINNATI.

7 Percent Discount

For Cash Orders Received in

DECEMBER

This applies to all goods with exception of Shipping-Cases and other Honey-Packages for current use.

At Root's Factory Prices

C. H. W. WEBER CINCINNATI ...OHIO...

Office and Salesrooms, 2146-48 Central Ave. Warehouses. Freeman and Central Aves.

Honey and Beeswax

Chicago, Dec. 6.—The trade in best grades of white comb honey has been fair, yet retailers taking only small quantities at a time. This honey brings 14@15c; other grades are difficult to place at from 1@3c per pound less. Extracted selling at 7@7½c per pound for white; amber 6½@7c; dark 5½@6c. Beeswax, when clean and of good color, 30c. R. A. Burnett & Co.

Cincinnati, Nov. 24.—The demand for comb honey is relaxing to some extent, owing to the majority of the trade being well supplied. All fears of a comb honey famine have been allayed. We quote fancy white comb honey at 14@16c. Extracted honey is in fair demand. Quote amber at 5¼@6½c, according to the package and quality. Fancy white and white clover extracted at 6½@8½c. We are paying 28½c per pound delivered here for choice yellow beeswax.

(We wish to call the attention of the producer to the above honey quotations, who mistakably expects to receive these prices for his product. The above are our selling prices.)
The Fred W. Muth Co.

Toledo, Oct. 17—The honey market remains firm, with good demand, and prices the same as last quotations. Fancy white comb brings 15c; No. 1, 14c; fancy amber, 13c; buckwheat, 13c. Extracted, white clover, in barrels, 6¼@6½c; amber, in barrels, 5@5¼c; in cans, 1c to 1½c higher. Beeswax in good demand, 26c cash, 28c trade. Griggs Bros.

Albany, N.Y., Nov. 8.—Our honey market is in healthy condition; demand good; receipts about equal to demand. Prices are not quite as high as last year, but the tendency has been to work off the honey before cold weather, and we think the crop has come forward more than usual this season, which is a good sign. We quote: Fancy white clover, 15c; A No. 1, 14c; No. 1, 13c; buckwheat, fancy, 13c; A No. 1, 12c; No, 1, 11@12c; straight buckwneat is wanted in this market. Extracted, quiet; white, 7½c; mixed, 6½c; buckwheat, 6½c. Beeswax scarce at 30c. H. R. Weight.

Philadelphia, Nov. 20.—The demand has been very good for honey in the past 10 days. In fact, it takes a little sharp, cool weather to get people started, and when they do start, the demand continues for some months. We would say, now is the height of the honey season. We quote, in a jobbing way: Fancy comb, 15@17c; No. 1, 13@15c; amber, 12@13c. Extracted, fancy white, 7@8c; amber, 6½c. Beeswax firm at 28c.

We are producers of honey and do not handle on commission. Wm. A. Selser.

Indianapolis, Dec. 15.—There is a tendency for higher prices on best grades of honey. The demand for strictly fancy white comb honey exceeds the supply. Demand for lower grades of comb honey not good. Numerous shipments of honey arriving, but no one producer seems to have very great quantities to offer. I quote fancy white at 15@16c; No. 1 in poor demand at 12c, and amber dull at 10c. Best grade extracted brings 8@9c in 60-lb. cans; amber slow at 6c. Beeswax, 30@33c. Walter S. Pouder.

Denver, Nov. 11.—No. 1 white comb honey, per case of 24 sections, $3.35; No. 1 light amber, $3.00; No. 2, $2 50@3.00. Extracted honey, 6¾@7 cts. per pound. Supply is light and we could make quick sales of consignments at above figures. We pay 24c for clean, yellow beeswax delivered here.
The Colo. Honey-Producers' Assn.

Cincinnati, Nov. 17. — The nice weather holds back the demand for comb honey. Crops seem to be exceedingly short and producers in the West keep the prices high. We quote as follows: Fancy water-white and No. 1 white clover, 14@16c; No. 2, 12@14c. Extracted seems to be more plentiful, and we quote same in barrels, light amber, 5¼@5½c; in cans, ½c more; white clover, 7@8c. Beeswax, 28@30c.
C. H. W. Weber.

New York, Dec. 6.—The demand for comb honey continues to be fair for all grades. Prices practically remain the same. We quote fancy white at 14@15c; No. 1 at 13c; No. 2 at 12c, and buckwheat at 10c per pound. Extracted honey is in good demand, especially California honey with large supplies. We quote white at 6½@7c; light amber at 6c; buckwheat, extracted, at 5½@6c per pound; Southern at 50@60c per gallon. Beeswax firm and steady at 29@30c per pound. Hildreth & Segelken.

San Francisco, Dec. 6.—White comb. 1-lb, sections, 9@10 cents; amber, 7@8c. Extracted, waterwhite, 4¾@5c; white, 4½@4¾c; light amber, 4@4½ cents; amber, 3½@4c; dark amber, 3@3½c. Beeswax, good to choice, light, 26@27c; dark, 24@25c.

Honey is being offered more freely at appearing quotations than for some weeks past, and it now appears that growers are awakening to the fact that they can not force prices any higher by holding their honey. At these figures there should be a good profit to the bee-men and a small margin to jobbers. Hawaiian extracted ambsr is selling at 2½ cents, at primary points, but it is not likely that California apiarists have anything to fear from competion, as their crop is all marketed in England.

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AMERICAN BEE JOURNAL

45th Year CHICAGO, ILL., DECEMBER 28, 1905 No. 52

Apiary of R. F. Wutzke, Chicago, Ill.

Home of R. F. Wutzke, Chicago, Ill.

Apiary of J. M. Buchanan, of Franklin, Tenn.—(See page 898.)

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY
334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec05" on your label shows that it is paid to the end of December.

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(INCORPORATED)

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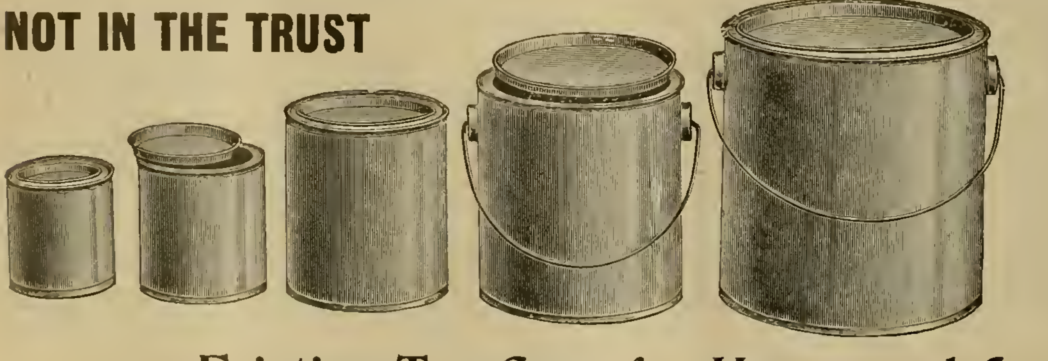

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"	January 1	"	7 "
"	February 1	"	6 "
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"	April 1	"	2 "

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We have scattered in and around Medina 5 apiaries devoted exclusively to bee and queen rearing, supplemented by 5 more in New York, Pennsylvania and Cuba, and we control the product of several other large queen-breeding establishments. Our queens are bred with scientific care. We test every device we make before it is introduced to the public.

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Two railroads run their cars to our doors. From a dozen to 20 men are kept busy loading and packing the 175 to 200 carloads we ship every year, besides the thousands of less than carload shipments. Eight express trains a day. With large warehouse packed full and a great factory it is a little wonder that Roots have gained a reputation for promptness in filling orders for the hundreds of things in their catalog.

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THE AMERICAN BEE JOURNAL
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(Entered at the Post-Office at Chicago as Second-Class Mail-Matter)

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor | CHICAGO, ILL., DECEMBER 28, 1905 | Vol. XLV—No. 52

Editorial Notes and Comments

A Happy New Year

to every reader of the American Bee Journal—throughout all of 1906—is our wish.

The Annual Index in January

Owing to the meetings of the National Bee-Keepers' Association and the Chicago-Northwestern Bee-Keepers' Association last week in Chicago, it was impossible for us to get out the usual annual index for 1905 that we have published for years in the last number of the American Bee Journal for the year. We will, however, put it in some number for January, in such form that it can be removed and placed back with this number for binding purposes.

Massachusetts People as Honey-Eaters

Burton N. Gates says in the American Bee-Keeper, "Honey consumed in Massachuetts is one-fourth State product," and 200 tons are imported from other States. That would make 66 tons produced in the State, and 266 tons in all consumed, or some 530,000 pounds. That looks like a good deal of honey, but when it is divided up among the 2,805,000 inhabitants, it figures out only about 3 ounces as the yearly ration for each man, woman, and child in the State. Surely, there can not be very much stomach-ache in Massachusetts as the result of over-eating of honey.

Size of Winter Hive-Entrances

A wide gulf exists between views entertained in Ohio and in Canada. The editor of Gleanings says:

> "An entrance 4 inches wide and ¼-inch deep we have found to be quite sufficient. This will usually keep reasonably clear. I should prefer an entrance only one inch wide, but there is a liability that the bees will clog it up."

In the Canadian Bee Journal, page 219, "York County Bee-Keeper" says that after experimenting with entrances of different sizes, he is convinced thoroughly that for his locality a fair-sized entrance is necessary for best results, and this winter nearly every one of his colonies will go into winter quarters with entrances equivalent to 5 square inches. The editor thinks small winter entrances are regular death-traps for strong colonies, having made experiments with them that he has no desire to repeat, and says he has had best results with full-width entrances 12x⅜.

One would think that if there is any difference, smaller entrances would be needed in Canada than Ohio, and when such a wide difference of views exists as to demand an entrance 4½ or more times as large in the colder country, one can but wish that the Canucks and the Buckeyes would fight it out to a finish, so that one might know what is the best practice in this really important matter.

Interstate Pure Food Law

Of the 27,000 words of President Roosevelt's message, one paragraph is of special interest to bee-keepers. It is this:

> "I recommend that a law be enacted to regulate interstate commerce in misbranded and adulterated foods, drinks and drugs. Such a law would protect legitimate manufacture and commerce, and would tend to secure the health and welfare of the consuming public. Traffic in foodstuffs which have been debased or adulterated so as to injure health or to deceive purchasers, should be forbidden."

Whether any action will be taken upon the President's recommendation remains to be seen. There is a big lot of money invested in businesses that a law of that kind would not help, and there is the conservative Senate on the watch against doing anything too rash in the interests of the common people. But we will wait and see, and in any event President Roosevelt deserves thanks for doing his part in this particular matter.

Getting Rid of Ants

We often receive requests for directions for getting rid of ants. Here is one taken from The Garden Magazine:

> A few years ago the ants took possession of my yard and built mounds or "ant-hills" all over it. I tried all kinds of remedies, among them Paris-green, London purple, corrosive sublimate, white hellebore, borax, tobacco, kerosene (or, rather, gasoline) and chloroform. With exception of the last two, all were used as solutions or mixtures in water. The solutions were gradually increased in strength till they killed plant-life with which they came in contact—but they didn't kill the ants. Chloroform gave them a brief vacation only, while gasoline killed not only the ants, but all the plants near by whose roots were affected in the least degree, seemingly, by the oil.
>
> Finally, I found a cure for the pest in a mixture of Persian insect powder in water—¼ pound in a gallon of water. The mixture does not injure plants, though one thorough application destroys the ant-nest. Use pure powder, for much of the powder sold is badly adulterated, and hence of

little value. Use freshly-made powder, for unless kept dry and in air-tight containers after being made, it loses gradually its insecticidal powers.

Put a quarter of a pound of good powder into a watering can (or other vessel with spout, from which a small stream can be poured) and add a little water; stir until powder is thoroughly wet, and then add the balance of the gallon of water.

Keep stirring the mixture while using, and pour the mixture slowly into the tunnels of the ant-hill till they are all filled. In my experience one application destroys the colony. H. S. Jewett, M. D.

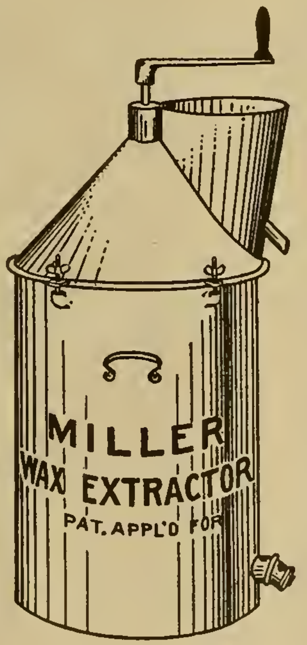
We suppose the Persian insect powder mentioned can be bought at any good drug-store.

A New Wax-Extractor

Arthur C. Miller, who is so often a disturber of existing opinions, believes that there is an objection to the wax-press, because the pressure, while pressing out the wax, at the same time has a tendency to hold it where it is. So he has invented a wax-extractor that works on the principle of keeping the mass as loose as possible, stirring it up repeatedly in the hot water. The following description of his extractor is given by him in the American Bee-Keeper, a patent being applied for:

"It consists of two cans, one within the other. The outer can, shown in the cut, has a conical cover with an outlet pipe for the wax, a faucet for the withdrawal of water, and an inlet for water. Through the top of the conical cover passes the shaft which moves the inner mechanism. The inner can has a perforated bottom and top, the latter being removable. Within this can and attached to it are parts of the grinding apparatus, and attached to the shaft which passes through the middle of the can are corresponding parts.

"The method of operation is simple in the extreme. After removing both covers hot water is poured in until the can is one-half to two-thirds full. Then comb is put in until the mass is up to the top of the can, then the covers are replaced, hot water added through the funnel on the cover, and as soon as the fluids reach the apex of the cone, the wax begins to flow out. The crank is then turned for a few minutes, more water is added, and more wax escapes. Where the water appliances are convenient, a small but steady stream of hot water may be allowed to flow in, and the wax will flow as steadily out. When all of the wax has escaped, the faucet is opened, some of the water drawn off, covers removed, the inner can (which contains all the refuse) is taken out, emptied, and returned to its place, and the process repeated. It will be observed that it is thus necessary to use but a little fresh water with each change. Furthermore, it is not necessary to have the extractor on a stove When it is used in the open air or in a cool or unheated room, it is advantageous to have the extractor protected with a jacket or wrapping of cloth or paper to conserve the heat."



Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get them subscriptions, for which work we offer valuable premiums in nearly every number of this Journal. You can aid much by sending in the names and addresses when writing us on other matters.

Miscellaneous News ✣ Items

Dadant Methods of Honey-Production.—Beginning with the first number of the American Bee Journal in January (next week), Mr. C. P. Dadant will commence a series of articles, giving in minutest detail the very successful methods of honey-production practiced by himself and his late lamented father for so many years. These articles will be illustrated, and will be worth dollars and dollars to the readers of the American Bee Journal who wish to make money in bee-keeping.

Be sure to renew your subscription promptly (if not already renewed for 1906), so as not to miss any of Mr. Dadant's valuable articles.

Apiary and Home of R. F. Wutzke.—The following was sent us by Mr. Wutzke:

Owing to the sudden changes of weather the past season, my bees could take but little advantage of the heaviest honey-flow.

At the beginning of last spring I had only 2 colonies. My intention being to increase my apiary, I immediately purchased 25 3-frame nuclei, each of which became a strong colony.

I have just counted my colonies, and found I have 65, from which I obtained 410 pounds of honey. I have to-day (Nov. 8) just completed a new landscape containing ten times the area of my present apiary, which I expect to occupy next spring. R. F. Wutzke.

The Apiary of J. M. Buchanan.—When sending the picture shown on the first page, Mr. Buchanan wrote thus:

I am mailing you a photograph of my apiary. I have about 30 colonies of Italian bees, and a few Caucasians, and shall give the latter a thorough test next season.

Bees winter here on the summer stands with no protection. I am running for comb honey exclusively, and sell all I can produce at 15 cents per section.

J. M. Buchanan.

The Bee as an Emblem.—Mr. C. G. Chevalier, of Maryland, wrote us as follows recently:

George W. York & Co.—The clipping herewith is from the Philadelphia Press, concerning the use of the bee as an emblem by Emperor Napoleon. Many of your readers will no doubt be interested in reading the translation of Book IV of Virgil's Georgics, written in the year 31, B. C. The subject of the fourth book is the management of bees; their habits, economy, polity, and government are described with the utmost fidelity, and with all the charm of poetry.

Virgil first describes a beautiful location for the apiary, then follows with advice as to the kind of hive most desirable. After giving some information regarding the treatment of swarms, the present-day reader will be astonished to learn that he instructs one to clip the wings of the "kings" (which we now know to be queens).

While we know that many of Virgil's ideas are erroneous, as illustrated by the above paragraph, as well as by his statement that they cull their progeny with their mouths from leaves and fragrant herbs, still the whole article is full of good advice even to the modern bee-keeper, and the reading of this chapter will surely be a pleasure to any one interested in apiculture. Yours truly,

C. G. Chevalier.

The clipping referred to by Mr. Chevalier is as follows, being a reply to the question, "Can you give the reason for Napoleon using the bee as an emblem?" sent to the Press by one of its readers:

"When it was decided in 1804 that the First Consul should assume the title of Emperor, the dignity to be hereditary, Napoleon had elaborate searches made into the stately ceremonials of royalty. Much pains were taken to ascertain the court etiquette that prevailed under the ancient regime. It was already known that the original symbol or insignia of royalty in France was the bee. This preceded the fleur-de-lys. In fact, many heraldic authorities held the opinion that the fleur-de-lys was only a conventionalized form of the bee with outspread wings. In adopting an imperial emblem, Napoleon went back beyond the fleur-de-lys of the monarchy and restored the bee for the device of the Empire."

National Legislation to Suppress Bees.—Certain people of a certain Iowa town seem to have had a hard time to get their names in the newspapers, so they hit upon the plan to petition Congress to prohibit the flight of bees in their little burg of Defiance. The Chicago Record-Herald of Dec. 10, contained the following account of the efforts of certain "otherwise" people to wipe out bee-keeping:

> The people of Defiance, Iowa, have petitioned their Congressman to draft a Bill, or to use his influence in the promulgating of legislation to rid the country of the common honey-bees running at large. Congressman Smith has been very much amused at the unique request, which came to him in the form of a petition signed by 125 voters, residents and citizens of the village. The petition reads as follows:
>
> "We, the undersigned citizens and residents of Defiance, Iowa, and vicinity, realizing the great damage done each year by reason of the common honey-bee roaming about and running at large in our cities and towns, by their continual biting and sipping of the precious fruits and beautiful flowers, to say nothing of their constant buzzing about one's ears from early morn till late at night, and their frequent stinging, do hereby earnestly and humbly pray you, as our representative, to prepare and introduce, and use your best efforts to have passed, a very stringent law forever prohibiting the running at large and roaming about our public streets, in our cities and towns, and especially the town of Defiance, all honey-bees of whatever variety or species. By so doing you will not only be rendering a great public service, but will place us under great obligations to you."
>
> The much-bothered and overworked Congressman replied that he knew of no part of the national federal Constitution delegating the power upon Congress for the enactment of such legislation, and assured his constituents that if he ever found any clause of the Constitution of the United States authorizing such a law as that petitioned for, he would first insist upon the power being exercised by prohibiting house-flies from running at large on his premises. He also added that in case the State of Iowa first drafted and passed such a law he would rest assured that he would feel safe to visit Shelby County without being stung.

We wish here to thank several of our readers who kindly sent us clippings of the above item in various forms. Of course, it is all very amusing to bee-keepers, and doubtless served its purpose for the Defiance population.

Contributed Special Articles

Selling Honey Direct to Consumers

BY J. L. STRONG.

In 1869 I took the first honey with the extractor. This I thought would be appreciated by the consumer, but, to my surprise, I could not induce any of my neighbors to try even a pound of it. So I put it in Mason fruit-jars and left it with my grocer, with the same result, until about Christmas, when I took them home. This was very discouraging, as I only had two jars to sell, and from that time to this there has been very little comb-honey used on our table, while the extracted has been in demand nearly every meal.

I now have a trade that enables me to sell my entire crop to the consumer. I am an economical man, and do not sell 10 cents' worth in a 5-cent bottle, to be thrown away as soon as empty; too much work for the producer, and too much waste for the consumer. It is all right for the city trade, as there are a few of the wealthy class who care but little for a few cents cost, if the article pleases the eye. This class of consumers buy but little honey.

I prefer to put up honey in pails—something that will be of value after the honey is used. These pails are of different sizes, holding from 5 to 25 pounds, and cost about one cent per pound of their capacity. I give the customer the privilege of returning the pail if he wishes to do so, in case he lives near. If at a distance, and he does not bring anything to put the honey in, then I quote price of pail and honey, and give him first price of pail when returned.

Now as to how I have worked up a trade from nothing to the entire crop from 200 colonies:

I often meet one who asks, "How are the bees doing?" I tell him in as few words as possible. I also tell him what I have to sell, and quote prices, and if I have time I give a short talk on the values of honey as a food and a medicine. In this way I often interest several and take orders for several dollars' worth of honey from different ones.

I also have a "honey list"; this consists of the names and addresses of those who have bought honey, or will be likely to do so in the future. Then when I have honey to sell I quote prices on a postal card to each name on the list, and tell how it is put up. For this trade I use 60-pound square cans, screw top, while the honey is liquid; and after it has candied, lard cans, with loose top, do better, because it can be easily crated for shipment, and when received the cover can be taken off and the honey dug out without cutting the can or melting the honey. The second-hand lard can costs 16 2-3 cents each, and holds 75 pounds net of honey.

The prices at which I have sold extracted honey have been from 7 to 15 cents a pound; the latter when we have had a short crop, to save some for medicine, as they expect me to have honey at all times, and they have not been disappointed.

The past season I have sold at 8 1-3 cents, while I was extracting, but now at 10 cents; and as I have but 200 pounds left, I will sell the balance at 12½ cents.

There is but little sale for chunk honey in our market, as the broken comb is objectionable. We can sell section honey if nice, but only in small quantities, and not at enough higher than extracted to pay the difference in cost of production.

I have sold six 60-pound cans in one order this season, probably to be divided among his neighbors.

My crop this season was 2,000 pounds of extracted, and 350 pounds of comb honey—all gathered in the month of June from white clover, and it was fine.

Clarinda, Iowa.

* * *

A Consideration of Nectar and Honey

BY ADRIAN GETAZ.

The nectar gathered by the bees on the flowers, and the fully ripe honey, are really two different things. The nectar contains about three-fourths of its weight of water, the remainder being sugars. Of these, the largest part is cane-sugar—the same kind as constitutes the white granulated sugar bought in the stores. The others are like those found in the fruits and the corn syrup—they are usually called inverted sugars. There is also an excessively minute quantity of essential oils which give the different kinds of honey their peculiar taste, color, and, perhaps to a slight extent, odor.

On the other hand, the ripe honey contains only one-fourth water, or about that proportion. And nearly all the sugar is now inverted. A small proportion of mineral matter, probably due to the pollen, is also found. Some formic acid has also been added by the bees. To that acid is due the peculiar taste common to all honeys, and also its keeping qualities.

During the transformation a considerable change of taste or flavor has taken place. The nectar has only an insipid, indifferent taste. An eminent writer calls it a "silly taste." The taste of the honey need not to be described here, as all the readers of this paper know it.

THE TRANSFORMATION.

There is no doubt that a part of the water contained in the nectar is separated and rejected by the bees at once, during the gathering and the time of going back to the hive. Some analyses of the nectar gathered during the day have shown such a large loss of water that there is no doubt that a part of it must have disappeared before reaching the hive. A few years ago a French apiculturist undertook to feed his bees out-of-doors. He made a syrup of sugar and water in about the same proportions as found in the nectar of the flowers, and placed the feeder at a distance of about a hundred yards from the hives. The ground and the grass over which the bees were flying was wet all the time with the water ejected by the bees. That water was tasteless, showing that a complete separation had taken place. A report of the experiment is found in the American Bee-Beeper for August, 1905, page 162. In the early editions of the "A B C of Bee Culture," A. I. Root states that when the bees were gathering nectar heavily from a patch of honey-plants near by, he could see, in the morning, by placing himself on the path they were following, the ejected water as a kind of mist from their bodies. Other cases have been observed.

During the following night the nectar is handled by the bees; that is, they take it in their honey-sacs, and out and in again, and finally deposit it in the cells. During the process more water is eliminated, and formic acid and probably other substances contained in the bees' saliva are added. The honey is not ripe yet. Gradual changes occur slowly under the influence of the heat of the hive, and after some weeks, more or less, the nectar has become honey. Its composition has changed completely; it now contains only about one-fourth water, and nearly all the sugar has been inverted. The consistency has become like a syrup, while the original nectar was nearly as limpid as water. The taste has become rich, sweet, and delightful.

THE HONEY-FLOW.

Important questions are, What are the atmospheric conditions which produce a honey-flow? What may be the influence of the nature of the ground on the honey-plants? or what other cause may exist?

There is no doubt that the richer the ground, and the better adapted to the honey-producing plants, the more nectar will be produced. The European writers say that more nectar is produced on limestone ground than on others, excepting a few plants that do not prosper on limestone land.

The temperature has a marked effect. Buckwheat, for instance, will not yield nectar unless the nights are cool. On the other hand, the tropical plants require a very high temperature. Each plant seems to do the best at a certain temperature.

The most important condition for a heavy honey-flow is an abundant moisture in the ground. The plants are constantly pumping water from the ground, most of it having been absorbed through the leaves, some helping to form the leaves, branches, fruits, etc., and the nectar. When the supply of water begins to run short, the growth of the plant is retarded, and soon the flow of nectar ceases. Later the leaves begin to wilt during the day, but recover during the night. If the drouth continues they fail to recover, and finally the plant may die entirely, or at least the portion above the ground.

When the effects of the drouth begin, the flow of nectar occurs in the morning only, some time before ceasing entirely. During the night no absorption of moisture takes place, but the water contained in the ground continues to ascend. This, helped by what the dews furnish, enables the plants to produce nectar for a few hours in the morning. I have often seen the hives almost empty of bees in the early part of the day and then at perhaps 9 or 10 o'clock, or later, all the bees come back and hang at the entrances in big bunches until night.

Some of the plants blossom only in the morning, and their blossoms last in some cases only a few hours. Such, of course, necessarily yield only in the morning.

A cause of mistake is that the bees work in preference on the flowers or other sources of sweet substances that yield the most. Very often we read that such or such plant yields nectar in a certain locality but not in another. The probability is, at least in most cases, that there was some other plant in one of the localities that yielded more than the one considered.

Some plants require much less moisture than some others to grow and produce nectar. Those with long roots will resist the drouth much longer than those with short roots, being able to reach whatever moisture may remain deep in the ground after the surface has already dried up completely. The trees will, of course, resist the longest, and depend chiefly on the amount of water stored up deep in the ground during the winter, while the plants, especially those with short roots, depend on the summer rainfall.

HONEY-DEW.

All the honey is not gathered from the flowers. Some of it comes from the juices of broken fruits; some from the cider mills; some from the watermelon rinds thrown away; some from the confectionery shops. Any sweet, anything containing some sugar, inverted or non-inverted, is gathered by the busy bees.

A large portion is honey-dew. There are different kinds of honey-dew. Some plants have, besides the nectaries in the flowers, some in other places, usually at the base of the stems of the leaves. These extra-nectaries produce a real nectar like that of the flowers. The pear-trees, cotton, and cowpeas, are the most conspicuous examples.

The real honey-dew is seen in drops on the leaves of several kinds of trees, oaks, ashes, hickories, etc. Not only the leaves but the ground around and under the trees is sometimes completely bespattered with it.

It might be thought at first that the honey-dew is secreted by the leaves themselves, but it is on the upper surface only, and in drops here and there. If it was a secretion it would be all over the leaves, since their structure is the same all over. Again, if it was a secretion it would reappear after the drop is wiped off, but it doesn't, showing, therefore, that the drops have fallen on them.

If we look at the under side of the leaves we will see here and there some small green insects of the kinds known as plant-lice or aphides. If now we climb the trees we will find them by thousands on the young twigs and new leaves about the top of the tree—enough of them to account for all the honey-dew produced. At least that is the report of all who have done any climbing.

It is not necessary to climb trees to see how the honey-dew is produced. Plant-lice are found on many plants and bushes. Those on the rose-bushes are the easiest to observe. With a cheap magnifying glass they can easily be examined. They suck the sap of the leaves and twigs with a tongue similar to that of the bees. This sap constitutes their food, and what remains is ejected through two tubes, situated at the other end of the body. The quantity produced is astonishing. Bees of all sorts, wasps and ants are seen helping themselves even to the extent of sucking it from the ejecting-tubes.

Occasionally, some kinds of scales and other insects are numerous enough to produce some kind of honey-dew. This is usually of the worst quality possible.

The regular honey-dew from plant-lice is, in my locality, at least, of tolerably fair taste. Its color is like a light amber honey to which some ink might have been added. It is much darker in some years than others. In mountainous districts we get some honey-dew from the firs and spruces. This is very white and has a strong, resinous taste. This resinous flavor disappears in the course of four or five months, in the sealed comb honey as well as in the extracted.

Honey-dew contains only inverted sugars.

Knoxville, Tenn.

Work in the Apiary for January

BY C. P. DADANT.

THIS is the month when there is the least work in the apiary. Our attention consists only in trying to keep the snow from the alighting-board. Yet in the very coldest weather we allow it to remain there, even if it obstructs the entrance, because it is a warming blanket which intercepts the wind and permits the air to sift through. I used to think that hives that were snowed under were in danger of smothering. This opinion was changed very materially when I visited the apiary of a box-hive bee-keeper some 25 years ago and found that his hives were entirely lost in the snow. The location of some of them was indicated only by a slight elevation—a sort of mound of snow. These hives were lying close to the ground and the spot was well sheltered, so that the snow had gathered there. It was a warm day and I suggested to the owner that it might be well to give the bees some air. We did, and I believe we did them more harm than good, for many of the bees had a flight and were lost. I do not think that they needed it. Their hive was so well protected that they did not feel the changes of temperature as they must have felt them after we liberated them.

In our movable-frame hives, which are up from the ground and have more or less upwards ventilation through fissures in the cover, I believe that there is not the least danger whatever of having the bees smothered by leaving them buried in the snow, or by doing as one of our oldest bee-keepers does—covering them up with snow, when it is plentiful and the weather down to the zero mark.

He holds that the more they are sheltered by the snow, the better they fare, and this is very probably correct as long as the cold days continue.

But there is a reverse to this. It is when the snow melts and changes to ice. If the hive has no upward ventilation or fissures through which air may enter, the entrance and lower joints may be frozen entirely fast, when the question of smothering would be a matter of only a few days.

Again, if warm weather comes and the snow melts off, it becomes necessary for the bees to take a flight. They think so, at least, for they begin to worry and seek the entrance. It is at this time that the cleaning off of the snow from the entrance proves useful. If the hive is sheltered with snow from all sides, but the alighting-board is clean, the bees are sure to find a dry spot when they come out.

But why not keep them confined when the snow is on the ground? Well, you may try it if you choose, but the trials we have made at confining bees on warm days have always been disastrous. They fret and worry, and if they are loaded with feces they are often compelled to discharge them within the hive. We have concluded that it was a mistake to confine the bees, even in snow-time, if it is warm enough for them to fly. Yet, if they have not been long confined, and the snow is deep, and the weather rather doubtful for a flight, they may be induced to remain quiet by sheltering the hive from the rays of the sun for the few warm hours. A very good plan, if you use movable roofs over the top of the hives (and this should be done), is to turn the roof on edge, in front of each hive for the time of their flight. This keeps the sun's rays off and they will not worry. But if it is warm enough for them to fly, and they insist on coming out, then turn this roof completely over, on the snow, in front of the alighting-board, and you will have a good dry spot on which they may alight without settling down on the snow, for the bee that alights on the snow in January, unless it be an exceptional day, is seldom able to regain its hive.

The prevention of mice is important. When the entrances have been worn to a sufficient size to admit of mice, they may be reduced with a metal strip that will cut the height of the entrance to about one-fourth inch.

The colonies in the cellar will keep quiet this month. An occasional glance at them will indicate their needs. Darkness, sufficient air, and an even temperature of about 40 degrees, will insure absolute safety. It is pleasant, when the north wind is roaring during a cold January night, to go down into the cellar and listen to the gentle murmur of the bees, which will delight our ears again next May by their hum, while they fly about the blossoms and help the fertilization of our fruits. Hamilton, Ill.

Honey as a Health-Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food", written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey". It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey the more honey they will buy.

PRICES, prepaid—Sample copy for a two-cent stamp; 50 copies for 70 cts.; 100 for $1.25; 250 for $2 25; 500 for $4.00; or 1000 for $7.50. Your business card printed *free* at the bottom of the front page on all orders for 100 or more copies. Send all orders to the office of the American Bee Journal.

Convention Proceedings

Report of the Worcester Co., Mass., Conventions

The Worcester County Bee-Keepers' Association began their winter series of meetings Nov. 11, 1905. The first meeting of the season was of an informal nature, reports from different bee-keepers in this vicinity being heard.

The season was not, as a whole, a very profitable one. The average amount of honey was about 30 pounds; 589 pounds was the largest amount reported, and that from a small apiary. One of our heaviest bee-keepers works almost entirely for increase, and does not aim to produce much honey.

Only one bee-keeper reported any diseased brood, and that from a district that has had trouble before.

The matter of holding an apiarian exhibition in the near future was brought up and left in the hands of a special committee.

James Wheeler was announced as a future speaker, likewise Arthur C. Miller, of Rhode Island, who has spoken to us several times before.

These topics were suggested as suitable ones for future meetings:

"Honey, its composition, uses, and value as food," "History of bee-keeping from Greek and Roman times up to the present date," "History and methods of artificial increase," "History and methods of queen-breeding," "Anatomy and structure of the bee and relations to the colony," "Bee tongue, its lengths and parts, and relation to red clover," and "Methods and difficulty of wintering."

The following is something further concerning the meeting of Nov. 11, 1905:

There is money in the production of wax, for pure, unadulterated beeswax is in great demand, and jewelers and people in many other lines cannot get along without it, and will pay from 50 to 75 cents a pound for it gladly. Not nearly the amount of beeswax consumed in this country is supplied by bee-keepers of the United States, and much of it comes from Mexico and the West Indies.

Much interest is being manifested by people of the county in the keeping of bees and the production of wax, and at the close of yesterday afternoon's meeting five new members were admitted to the Association. These were Fred Rich, S. H. Cheney, E. C. Putnam, C. H. Harris, and Hon. Ledyard Bill.

The meeting was called to order by Pres. F. H. Drake, of East Brookfield. It was well attended, between 40 and 50 members and guests being present. Charles R. Russell was the speaker of the afternoon, and talked on

WAX, ITS DISCOVERY, FORMATION, USES, ADULTERATIONS, AND PROPER WAYS OF EXTRACTING.

After his talk, Mr. Russell and Arthur C. Miller showed how wax is extracted, Mr. Miller using a machine of his own invention, while the speaker used the Ferris wax extractor.

The lecturer also showed how pure wax is tested in benzine and alcohol and water, having several jars and bottles on exhibition.

To make his statements regarding the great market for wax even more emphatic, Mr. Russell read a letter which he received from E. F. Phillips, acting in charge of agriculture in the United States Department of Agriculture at Washington. This was in answer to a letter written by Mr. Russell, and was as follows:

"I am unable to give you an estimate of the amount of beeswax produced in the United States annually, because I have no information on which to base the estimate. You may be interested, however, in knowing that in 1903 the importation into this country amounted to 488,576 pounds, valued at $127,220. Wax was imported to a large extent from Mexico and the West Indies, and the importations for 10 years back show a very decided increase.

I am sorry that I can give you no information as to the domestic production of wax.

"You may be interested in some things which were found by the bureau of chemistry of this department. Samples of comb foundation were examined from all over the United States and no adulterations were found. However, three samples were received from Canada which were not pure and, it is claimed, that a considerable portion of the comb foundation used in Europe contains paraffin or cerasin.

"Not long ago I was talking to the chemist who has charge of the beeswax analysis in the bureau of chemistry, and he said it was a very difficult matter to be perfectly sure of adulteration in wax. He showed me a cake which had every appearance of being pure beeswax and of a very decided odor, which is so characteristic. He said that an analysis of this showed that it was pure cerasin, and that the odor had been given to it by the use of some chemical. It contained absolutely no beeswax, but had a melting point exactly the same as that of pure wax. All manner of substances are used in adulteration, including not only paraffin, cerasin, and similar waxes, but also such things as starch.

"It is then certainly to the interest of bee-keepers to watch this adulteration very carefully and to run down all cases of adulteration that can be found, and thus increase the value of pure wax, which now brings such a low price."

It was announced that the committee appointed to consider the apiarian exhibition had decided that next fall would be the best time for such a fair. It will take as long as that to complete all plans for such an exhibition.

Mr. Russell said in part: "I have often wondered why someone did not volunteer to give us a little talk on wax, and by wax I mean beeswax, not the vegetable production.

"Wax, you know, stands second to honey among bee-products. Before I am through talking I am going to try to show: First, what wax really is, when and by whom discovered, how formed; second, mode of extraction; third, uses of wax; fourth, value of wax, amount produced, tests for purity, and the like.

"First, what is wax? All bee-keepers and others perhaps have watched the bees entering the hives with their hind legs covered with large masses of colored matter which we have learned from various sources was pollen. We have also noticed the different colors produced, most generally some shade of yellow, or orange, although crimson, green, or even black, may be seen. This pollen was considered by the ancients to be wax and was called by Reamur, a French natural philosopher of the early part of the thirteenth century, 'crude wax.'

"This opinion was overthrown by the discovery of a French peasant in 1768 that the substance used in the construction of a comb emanated from between the rings of the abdomen. Even at this early date there were bee-keepers' associations, and I found that this peasant was a member of one of these societies. The real discoverer of wax, however, is disputed.

"In 1769 Francois Huber, a blind bee-keeper of France, assisted by a faithful servant, repeated the discovery of the French peasant, and experimented in a manner that has made his name famous.

"On the abdomen of the bee there are 12 plates, 6 on a side. I will quote from authority: "If the abdomen be elongated there will appear extremely smooth and delicate expansions upon which plates of greater or less size and thickness may be discovered. These pale, yellow, tender discs are 8 in number, 4 on a side. The contour of the membranes determines the form of the wax scales which are molded upon their surface as the secretion passed from the glands beneath.'

"We have not come to the point where we are ready to answer that important question, 'What is wax?' Cheshire says: "Wax, like every secretion, vegetable or mineral, is at first a liquid. It is derived from the blood by cell-action, and then transuding the structureless membranes, assumes the solid form of the scale.' He further says: 'Wax is not chemically a fat, yet it is nearly allied to the fat in atomic constitutions.'

"Langstroth says: 'Wax is a natural secretion which is produced by bees, as cattle produce fat by eating. The first condition indispensable for bees to produce wax is to have the stomach well filled.' Nearly all authorities tell us that wax is formed after gorging or overeating.

"It takes about 24 hours for a bee's food to become transformed into wax. It is more noticeable in young bees than old, working on the general supposition that it is more difficult to fatten an old animal than a young one.

"These wax scales are so small and light that 100 of them hardly weigh as much as a kernel of wheat. That these scales also differ from the wax of the comb has been readily shown. The scales are carried to the mouth of the bee and there masticated with a salivary secretion, imparting to it the quality of ductility.

"Two experimenters have stated that bees use about 7 pounds of honey to produce one pound of wax. You can readily see, therefore, that feeding for wax is not profitable.

"Under my second head, 'Mode of extracting wax,' I can speak more from my own observations and experiments. There are many ways and devices for extracting, but the prime factor of them all is heat. The solar extractor, I thought at one time, was the best thing that could be invented, but when a spare day came to me, and that day was cloudy, and I had a lot of old comb on hand, I concluded I must try something else. My solar extractor was made similar to all others. It is not successful at all times in this climate, for the sun's rays are not hot enough excepting for a comparatively short time. There is another serious objection to the solar extractor. You cannot use in it old comb filled with cocoons.

"The Ferris extractor has been a great help to me, although the first time I used it I ran against two or three snags. The Ferris consists of an outside boiler, an inside basket and a screw press. One thing I like about the extractor, you can put in a whole frame and clean it off in a short time."

Mr. Russell stated that his principal objection to the Ferris extractor was that one must take time if he wanted to get the wax from the center. The invention of a new extractor by Mr. Miller does away with that, and Mr. Miller demonstrated how it worked.

Mr. Russell said further:

"Under my third head I am going to mention briefly the principal uses of wax. Wax enters largely into the make-up of candles. Several authorities state that the Roman Catholic church prefers candles made of pure beeswax, while one authority says: 'It is prescribed to priests to use exclusively wax produced by bees.'

"The women are very familiar with waxed threads, but there are so many adulterated pieces sold that they wonder sometimes what they are using. Floors are polished with waxine or something that contains wax. Wax also enters into ointments. Sculptors and painters have a use for wax.

"Bee-keepers, of course, are at sea unless they have wax for foundation starters for frames or sections. Nearly every farmer uses wax; that is, if they do any grafting at all. In many cabinet shops, in shops where wooden patterns are made, pure wax is used to fill up cracks, cover up screw-heads and preferred everywhere for finished work. There are a thousands and one uses for wax, and sometimes one is led to ask, Is wax second to honey? Ought it not rather to be placed first in commercial importance?

"Fourth and last, we have the value of wax, amount produced, tests for purity, and the like. It is impossible to get at the actual value and the amount of wax produced.

"There are several vegetable waxes used in adulterations. Japanese wax is obtained from the small-stone fruits of several species of rhus cultivated in Japan. This rhus is akin to our stomach.

"Then there is the myrtle-berry wax, obtained from the fruit of the myrica.

"Carnuba wax is an exudation on the surface of the growing leaves of the carnuba palm, which flourishes in tropical countries of America.

"Palm wax is also an exudation found on the stems of two other South American palms.

"Other adulterations are: Parffin, a product of distillation of many organic substances.

"An American petroleum contains very little paraffin, ceresin, a gummy substance, starch, tallow and other greases. It is a matter of fact if you want to adulterate anything, adulterants can be readily found.

(Continued from page 883)

See Langstroth Book Offer on another page of this copy of the American Bee Journal.

Our Sister Bee-Keepers

Conducted by Emma M. Wilson, Marengo, Ill.

Some Proper Questions for Sister Bee-Keepers to Answer

If you were to meet one of the bee-keeping sisters, what are some of the things you would like to ask her, supposing you thought it would not be considered impertinent? Perhaps something like this:

"How many colonies did you have last spring, and how many in the fall? How much honey did you get, and was it comb or extracted?"

You wouldn't think it impolite to be asked those questions, would you? Well, suppose each sister sends in the answers. You may be sure it will make interesting reading. As the advertisement writers say, "Do it now, before you forget it."

Getting Unfinished Sections Emptied

On page 810 I noticed an item by one of our bee-keeping sisters, stating that she could not get her bees to empty honey-sections. Here is my experience:

I take the supers which have not well-filled sections and place on top of the hive, next to the brood-frames, and scrape or puncture the cappings, and you may be sure the bees will empty the sections quick enough.

St. Ansgar, Iowa. (Miss) Annie Knutson.

Yes, that works well in many cases, but for some unknown reason it can not be depended upon in this locality. The bees will clean up the cells that are punctured, but that's as far as they will go. Perhaps if they were scarce of honey in the brood-chamber, the case would be different. Thank you, all the same, for telling us about it.

Honey Drops

Blend ⅓ cup of extracted honey or rich maple syrup, 1 teaspoon butter, 1 egg, well beaten, ⅔ cup of flour, sifted with ½ a teaspoon of baking powder and a pinch of salt. Drop by teaspoons on a tin, and bake in a quick oven. These proportions will make about 20 cakes. Icing may be of maple or fondant.—Good Housekeeping.

Converting Wax-Scrapings into Marketable Shape

How can I convert the wax-scrapings into marketable shape? I have a large quantity that I have accumulated by scraping the sections (after removing the honey), and in other ways. Mrs. C. D. Wiggin.

It is hard to get beeswax into anything but marketable shape if you get it separated from the combs at all, for no special refining is needed. Indeed, some comb-foundation makers prefer to get it without any attempt at cleansing such as is done with acid. If you have a large amount of wax to render year by year, the best thing is to get a wax-press. Probably, however, the amount you have would hardly call for that outlay. A solar wax-extractor costs much less, although it does not make as thorough work in getting out the wax, especially with old, black combs. The solar has the advantage, however, that you don't have to trouble with any fire-heat, the sun doing all the heating. But, of course, it will work only in hot weather. You can make a solar extractor yourself, if you have any turn in that direction. All that is needed is a box covered with glass, and in it something to hold the combs to be melted, with a vessel to catch the wax. Another plan that will work any time of year is thus given in "Forty Years Among the Bees."

"An old dripping-pan (of course a new one would do) had one corner split open, and that made the extractor. The dripping-pan is put into the oven of a cook-stove with the split corner projecting out. The opposite corner—the one farthest in the oven—is slightly raised by having a pebble or something of the kind under it, so that the melted wax will run outward. A dish set under catches the dripping wax, making the outfit complete. Of course, the material to be melted is put in the pan the same as in the solar extractor."

It is well to have some water in the pan that catches the wax, and if the shape of the cake of wax does not exactly suit you, you can melt it over again in another vessel with quite a little water in it. The vessel should be flaring outward, so the cake of wax will come out easily, and the vessel should not be iron, which will darken the wax, but tin or some other substance. When the cake of wax has cooled enough to be no longer liquid, but while yet pretty warm, scrape from the bottom the impurities that have settled there. Some wax will be scraped off with the rest, and this can be melted over again.

Noted Sisters Interested in Bees

It is pleasant to note that among those prominent in advancing the interests of bee-keepers are some of the sisters in conspicuous positions. In England the Baroness Burdett-Coutts has for a long time been looked up to as the special patroness of bee-keepers, and in Austria the empress is said to hold the same position. In our own country no less a personage than Miss Helen Gould, it seems, has found time to leave the care of her millions for a few days to look after the interests of birds and bees. A belated item in the papers gives it in this way:

"Miss Helen Gould has consented to visit Warsaw in August as the guest of Col. Isaac Washington Brown, the "bird and bee man" of Rochester. He has conducted a campaign for the better treatment of birds and bees for several years, and Miss Gould, who became interested in him, has provided means for him to carry his work forward. She will remain several days at Warsaw, conferring with him."

Mr. Hasty's Afterthoughts

The "Old Reliable" as seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

Farmers and Bee-Keeping.

H. C. Barnard, on page 795, seems to figure irresistibly that a farmer with 80 acres of land has only the *absolute right* to keep 2 colonies of bees. Many farmers—even many that don't want to keep a bee at all—would dislike to admit that.

Second-Hand Oil-Cans for Honey.

If I was a honey-buyer I should refuse to buy honey in second-hand oil-cans at any price whatever. (Can be cleaned; but practically many of them certain not to be.) If actual buyers take the same view, and I think some do, it behooves us to protest the second-hand can serpent whenever and wherever he raises his ill-smelling, greasy head. Vide page 796 This very writer "gives the practice away," if you will only weigh his language closely.

Incidentally, it is interesting to learn that the railroads and the Standard together make the people of Arizona pay 40 cents a gallon for 10 cent oil. Of course, two prices would abundantly pay for transportation; but human greed and what-you-going-to-do about-it can demand *four* prices. If misery loves company, honey-men out there can console themselves a little.

The Editor's Back-Yard Apiary.

Glad to see the Editor's apiary—for the Editor's sake. And real nice, too—with that kind of niceness that does not touch sensationalism anywhere. Page 801.

About a Lady Bee-Keeper's Costume.

What a "dialogue" we should have (as the school children phrase it) if we could boil down all the comments lady readers will make on that costume which appears on the face of No. 47! Possibly somewhat like that below:

MRS. BLUNT—I like it; so there, now.

MRS. TARTE—If that's a woman, I would rather meet a man; and if it's a man, I would rather meet a woman.

MISS DUBLIN—Jist yez kape away from there and ye nadent mate eyther of them.

MISS BOSTON—A secret longing to get into trousers is, I fear, at the bottom of it, rather than any real need of such a garment.

MISS EDINBURG—Whole nations of *men* wear skirts from choice; and it really seems to me that women might get along with theirs, if they tried intelligently, and with no hankering for male attire.

MRS. BINTHERE—When men wear skirts they mostly don't wear them long, nor puffed out, nor exaggerated in any way. I didn't know my apiary dress hindered me until I was told. And Brother Bill says he would much rather wear my rig than the one in the picture.

MRS. GOODSOUL—I keep away from bees. If I was obliged to go among them I'd wear 'most anything in which I could feel safe.

And the Afterthinker puts on wisdom like a garment, and adds that lady bee-keepers have several lines of costume open to them, according to personal inclination. One course is to make the clothes they already have the basis, and modify them as little (or as much) as is really needed. Have the underclothes of firm material, and offering no passes of Thermopylæ for the enemy to march through. Have a big pocket, or more than one—else a belt with danglets. Have the skirts the opposite of full, and as short as the proprieties seem to allow.

Another course is to have a special costume decidedly different from that worn in the kitchen, and still not nearly so revolutionary as the one shown. Room for lots of genius and invention in this middle course.

Probably some would prefer to take man's suit exact, neither less nor more, put it on after entering the apiary and change before going away. This has the important advantage that strangers passing by do not stare.

If you do choose the fourth course, and follow the "pictur," how would it do to go a little further? Sew two big slippers to the bottom. From the knee up have them enough fuller that moderate skirts could easily be tucked in. Then don't take off the costume, but jump into them. And when somebody threatens to heave in sight, jump out of them again. Too warm some days—and—and—roaring lions and escaped lunatics sure to pass by on the other side.

AIKIN'S WAY OF CONTROLLING SWARMING.

So Aikin's favorite method of control is big room before the flow, and shake the most of them just as the flow begins. Looks good. But he also masses his shaken swarms to some extent, and that would hardly do for the strain of bees I have at present. Page 805.

GRAPE-PUNCTURING AND BIRDS.

I think past judgment about grape-puncturing was that most is done by small, swift, sly birds, and just at the peep of day, when few people (at that time of the year) have their observation clothes on. This measurably explains the incorrect suspicion that it must be night-birds. Night-birds all flesh-eaters and insect-eaters, I believe. But the sparrow (seen to tear open bags and eat the grapes within) seems to hold the first place in atrocity. Page 805.

Canadian Beedom

Conducted by MORLEY PETTIT, Villa Nova, Ont.

Hershiser Bottom-Board

O. L. Hershiser, of New York State, showed at the Ontario convention at Toronto, a bottom-board which is specially constructed for moving and wintering bees. It consists of a box 3 or 4 inches deep, with wire-cloth in the sides, and a block to close the front. For moving bees I would not exchange it for the Holtermann portico, as I consider it too much machinery to carry under the hive, with not enough advantage to make its use profitable.

Its great advantage in cellar-wintering is the deep space for dead bees, and the fact that a live bee can not fall to the floor with the dead one she is throwing out. It provides the necessary bottom ventilation, and at first sight would be pronounced an excellent invention. But here is the difficulty: We find it is not practical to confine bees to the hive while in the cellar. Weak colonies and nuclei *may* be confined without serious loss. Though I doubt that. But where strong colonies are so confined there are sure to be some bees that fly to the screen, try to get out, and make noise enough to rouse the whole cellar. This is no theory, but has been proved in my experience.

Bee-Keeping as a Business

The following from an old Farmer's Advocate is apropos the subject of studying and mastering one's business:

"We often hear bees are an interesting study. They certainly are, and the more we study the more interesting they become—and the more profitable. There's the point. While few succeed in a distasteful occupation, not many are in business for reasons other than the desire for board, clothes and extras.

"The diffiulty with bee-keeping is that it is not taken seriously enough. The idea is held and taught by all except the few who know differently, that bees are no trouble at all, and every one should have a few in the garden. What is the result? The honey market is in the condition in which the butter market was a few years ago—crowded with inferior goods put up in miserable shape. Those who see honey at our leading exhibitions, and then contrast it with what is taken in "trade" and sold by dealers generally, will appreciate this.

"Progressive bee-keepers welcome others to their ranks, if these new men give promise of being equally progressive. Those entering upon any new undertaking must carefully count the cost, else they fail. The financial expense in this case is practically nothing, and after the first cost the bees should, of course, pay their way or get out.

"Then there is the pasture. Twenty-five colonies to the square mile is probably the outside limit for average localities in Ontario in average years. Now consider carefully that the heavy work in bee-keeping comes at precisely the same time of year and day as in general farming. If the farmer or his son can spare time to produce a No. 1 grade of honey, he will be well repaid; if not, he would better let bees alone."

Bisulphide of Carbon for Fumigating Combs

"A York County Bee-Keeper" tells in the Canadian Bee Journal about using 5 ounces of bisulphide of carbon in a box holding 600 Quinby combs. He says:

"About Oct. 10, an article appeared in the American Bee Journal from the pen of that well-known apiarist, Mr. F. Greiner, of New York, in which he stated his preference for sulphur instead of the bisulphide, on the grounds that such large quantities of the latter had to be bought to be effective. Mr. Greiner said that it was estimated that one ounce of the drug was necessary for every cubic foot to be fumigated. According to that, the big box of combs should have had more pounds than I had used ounces, so it was with some trepidation that I hastened to have a look for (possibly) moths and grubs galore. However, an examination showed everything to be in splendid condition; not an egg had developed since I had last looked at the combs in August, and the grubs that were then present were all dead and as black as tar. Surely, the bisulphide on the other side of the line must be adulterated nearly as badly as those basswood hams we used to hear of. No, thank you, as long as 5 ounces of bisulphide of carbon will effectually fumigate 600 combs, I have no use for sulphur and its sickening fumes."

To this Editor Craig adds this comment:

"We think Mr. Greiner can not have used the drug properly, else he would have had better results. We must remember that the fumes of the bisulphide of carbon are heavier than the air, and therefore their tendency will be to descend or fall. The drug must, on that account, be placed above the combs, and in a broad, shallow vessel of some sort, giving as much surface as possible for rapid evaporation. Then, again, the fumigating box should be as air-tight as possible to prevent the fumes escaping, although we have had very satisfactory results from simply piling the extracting supers with combs, one above another, seven or eight high, and placing a saucer with 3 or 4 ounces of the bisulphide inside a rim on the top, and covering all with a hive-cover. The stuff is cheap—is sold ordinarily at 10 cents a pound—so that there should not be much temptation to adulterate it."

Doctor Miller's Question-Box

Send questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.
☞ Dr. Miller does *not* answer Questions by mail.

Three-Frame Nucleus and Queen

1. If I buy a 3-frame nucleus with queen, can I have the queen's wing clipped by the one from whom I buy? If so, will she come through with the nucleus all right? Can I thus secure a queen that will be in breeding condition?

2. Will a 3-frame nucleus give me any surplus honey the first year? Iowa.

Answers.—1. Most assuredly. A clipped queen will stand the journey just as well as an unclipped one, and will do just as good work afterward. Some shippers prefer to clip before sending, one reason for it being that a beginner sometimes buys a queen and tries to introduce her where another queen is present. The new queen is killed, and when the young bees hatching out show the wrong color the purchaser thinks he has been swindled, whereas the shipper was not at all to blame. If the new queen is clipped he will know she was killed when he finds a queen with whole wings.

2. Maybe, and maybe not. If you get it tolerably early, and the season is good, and especially if there is a good fall yield, you ought to get some surplus honey.

Running Out-Apiaries and Managing Swarming

I want to run three bee-yards, but can't do it with all of them swarming all the time. All the increase I would want would be one swarm from each strong colony. I thought of seeing the bees about once in 10 days. If they swarmed I would take a new hive with one-half inch starters of brood foundation in the frames and set it on the stand of the old hive, taking out a frame with the queen from the old hive and putting it into the new one, and also shake part of the bees off in front of the new hive; then put the old hive in another place for a day or two, and give it a sealed queen-cell or a queen. What do you think of this plan? Will the bees do any good in that way? Will they store honey? If my plan is not a good one, please tell me what you would suggest for running an out bee-yard where one can not be there all the time. Missouri.

Answer.—Yes, your plan will work, for it is practically the shake-swarm plan used by so many. You will find, however, that if you fill the frames half full of foundation you will have an undesirable amount of drone-comb. If you don't want to fill all the frames with foundation, instead of filling each frame half full, it will be better to fill half the frames full and put only shallow starters in the others. Give at first the frames with starters, for the bees are likely to build worker-comb at the start, and then when they have those frames filled, add the frames that are filled with foundation.

Full Sheets or Starters of Comb Foundation in Sections and Brood-Frames—Oilcloth or Super-Cover in Winter

1. What grade of foundation do you use for frames and for sections? I used a few frames the past season, and 6 sheets weigh one pound. Next season I expect to get 30 hives more, and want to use full sheets of foundation, and would like to know if lighter sheets would do as well as the heavy grade.

2. Will bees winter as well in the cellar with oilcloth on as they would with a super-cover without oilcloth and no super?

3. If I put in each hive 4 or 5 frames with starters, the rest full sheets, and 3 or 4 days afterward take out the full sheets so the starters will be filled with worker-comb, where should the starter frames be placed, in the center or at one or both sides of the center, when the full sheets are returned? I like full sheets; that does away with a lot of tramps (drones), but it costs a good price for foundation, so if anything more in this line you can give would be thankfully received. New York.

Answers.—1. For sections, thin super. I haven't bought any brood foundation for some time, but have used heavy brood and medium brood. The weight of foundation for brood-frames depends chiefly upon the support given. If no wires or foundation splints are used, it should be very heavy. Well supported by wires or splints, there seems no reason why something quite light would not do; and the thinner the foundation the less it costs to fill a frame.

2. Probably yes, although in a cold cellar the cover without oilcloth might be better.

3. In the center if not wholly filled; if filled it doesn't matter.

Questions Concerning Winter Conditions

Are any of the following eight statements untrue? If so, which, and why? They concern winter conditions:

1. In a painted hive in good repair there will be no large openings except the entrance, and the bees will always so completely propolize all cracks as to make the hive wind-proof, water-proof, and light-proof, except at entrance.

2. A telescope cover, which is merely a sheath of some sort, and not made air-tight around its bottom edges, can not be said to furnish a dead-air space around a hive, since the wind will blow up underneath somewhat, and heat from the walls of the hive, if these walls have any heat, will cause a current of changing air in the air-space, and if the walls have no heat the air-space would be useless. The only advantage of such covering will be to break the force of the wind against the upper part of the sides and over the top of the hive, and, by preventing rapidity of wind currents, will reduce the rate at which will be removed the heat of the top of the wooden walls and the top of the hive, *if they have any heat.*

3. As wax is a non-conductor, or poor conductor, of heat, a comb of bees conveys practically no heat along its edges, supports, or parts of contact of the comb or frame to the hive-walls. The hive-body, therefore, has no heat derived from the contact with the frames.

4. As the cluster in winter covers only half the frame-space, the walls of the hive are too far removed from the cluster to derive heat directly from the cluster of bees.

5. The air below the cluster and around the outside combs containing the cluster is practically identical with the temperature of the outdoor air.

6. The air above the cluster contains some heat radiated and rising from the cluster, and is lost by transmission to the cover or top.

Therefore—(*a*) Protecting the sides and bottom of the hive-body has no direct effect on the heat of the cluster.

(*b*) Protecting the top of the hive prevents the top losing the heat arising from the cluster.

(*c*) A telescope cover protecting more than the top, and the quarter-inch space above the frames is useless, and since it prevents quick action of the sun on the hive-walls in temporarily or slightly sunshiny days, thus interferring with the warming-up and drying-out process, such telescope cover is a damage, not an aid, to the bees.

7. The end to be sought is to keep the cluster as dark and quiet as possible until the heat of the outside air penetrates through the entrance and rouses the bees; also to keep the air in the hive as quiet as possible without stopping suitable ventilation. Could not this be best accomplished by a full-width summer entrance covered entire, except one-quarter of an inch at one side for egress, with fine-mesh screen to keep out mice, and, on warm days, robber-bees, said screen being backed by one thickness of burlap cloth, thus eliminating largely the effects of the wind and light, and rapid change without stopping slow ventilation?

Conclusion: Should not telescope covers and chaff hives be discarded for wintering, merely covering the top of the hive and the first inch of the sides, and using porous cloth at the full-width entrance?

8. The foregoing is all based on the statement recently printed in italics, that "The air within the hive and surrounding the cluster is very little higher than that outside the hive." Has any experiment proved this statement, or is it an assumed fact? INDIANA.

ANSWER.—You are getting things down pretty fine, and I don't know enough to be any too positive about some of them, but I can at least say how they look to me.

Statement 2 may or may not be true, according to the different interpretations put upon it by different persons. Some will read it through, and then add a *therefore* something like this (and I rather understand that to be your therefore, too): Therefore, any part of a telescope cover more than an inch below the top has no practical effect in keeping a hive warm. While it is true that so long as the telescope cover is open below there is no dead-air space, yet there is an approximation, and such a cover is quite different from leaving a hive entirely uncovered, just as stock will discover the shelter of a clump of trees or bushes in a cold wind.

Statement 5. I think that if you will put a thermometer in a hive, you will find that the air in the hive is quite a bit warmer than that outside during zero weather.

Statement 6 will hardly hold. It says practically that no heat is lost from the cluster except that which is lost by radiation directly upward. Doesn't heat always radiate equally in all directions? Neither is radiation the only means by which the heat of the cluster is lost. The likelihood is that very little heat is lost by radiation compared with that lost by convection, and convection affects the lower part of the cluster at least as much as it does the upper part.

You say that the outside wall prevents the heat of the sun from getting in during warm days. Aren't you just a bit in danger of clashing with yourself there? For if the outside wall is a bar to the passage of heat inward on a warm day, is it not equally a bar to the passage of heat outward on a cold day?

Is there not just a little bit of clash between statements 7 and 6? In 7 you want the cluster to remain quiet until the heat of the outside air penetrates "through the entrance," while in 6 you apparently want it to penetrate through the walls of the hive, for you say the telescope cover interferes with warming up.

Your scheme of closing the entrance with wire-cloth and burlap might work all right, only wouldn't there be danger that a quarter-inch entrance-hole would get clogged with dead bees?

Statement 8 is just a bit indefinite, the expression, "very little higher," being so elastic that one person might understand it to be many degrees more than another. Yes, the French scientist, Gaston Bonnier, and perhaps others, have told us just what difference there was between the temperature in and out a hive, but I can not give the figures. Of course they would vary according to conditions, and you can try it as well as any one else. At any rate, there is so much difference that it would hardly be safe to conclude that the walls of a hive are of no value in the way of protection.

I believe you are quite right that it is of more consequence to protect well above, but as to the rest—well, I don't know.

Some Good Clubbing Offers

A good many subscriptions to the American Bee Journal should be renewed at once. We wish to call special attention to the clubbing offers below, which we are sure will commend themselves. **The American Bee Journal one year and your choice of one of the following:**

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CONVENTION NOTICES.

Nebraska:—The annual meeting of the Nebraska State Bee-Keepers' Association will be held on Wednesday, Jan. 17, at 2 p m., at the Experiment Station Building of the Nebraska State Farm, at Lincoln, Neb. The meeting will be of interest to all bee-keepers. E. Kretchmer, of Iowa, will read a paper on "Bees and Fruit;" H. F. Smith, Assistant in Department of Entomology of the University of Nebraska, will read a paper entitled, "The Relation of Robber-flies and the Honey-Bee." A general discussion will give all present an opportunity to discuss subjects of interest.

Lincoln, Neb. LILLIAN E. TRESTER, Sec.

Colorado.—The Colorado State Bee-Keepers' annual convention will be held in the Chamber of Commerce Building, Denver, Jan. 30, 31, 1906. This will be during "Farmers' Week," when many farmers' organizations will be in the city holding conventions. We are assured of low railroad fares from all points of the State. We are planning for our usual good convention. R. C. AIKIN, Sec.

Loveland, Colo.

Reports and Experiences

Very Poor Honey-Year

This has been a very poor year with us—in fact, the poorest since we began in the bee-business, and that was in the early '90's. No nectar in flowers and millers make a bad combination for a bee-keeper.

Dexter, Mich. K. H. WHEELER.

Good Prospects in Cuba

Up to this date the honey crop in Cuba has been very good. Aguinaldo is a wonderful bloomer. Good colonies have already given 150 pounds of extracted honey.

Palacios, Cuba, Dec. 10. M. C. ENGLE.

More Black than Italian Drones

I notice considerable discussion lately about pure Italian bees sporting, or going back to blacks. One writer thinks that blacks are swifter on the wing; but even that will not account for it all. In my opinion they have not found the right solution yet. One of my neighbors, with 6 or 8 colonies, rears more drones than I do with 50 colonies, and they are just the ones that always have black bees.

A modern bee-keeper reduces the drone-comb to the minimum, but the farmer bee-keepers have a host of drones. The old queen is hived in an empty box or an empty modern hive, and if he helps any it is the second swarm. I have rendered a good many box-hives of combs for small bee-keepers this fall, and it is surprising the amount of drone-comb I found. A slipshod bee-keeper rears more drones in a few colonies than a good bee-keeper in a hundred. IRVING LONG.

Marceline, Mo.

Dead Wrong About the Sparrow

MR. EDITOR:—I have been reading about the bees doing so much damage to grapes, in the American Bee Journal. Well, any red-headed man can see the absurdity of such a statement. That sparrows will gladly sip the

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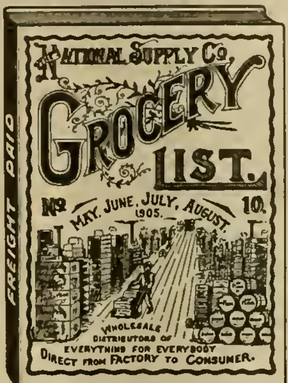
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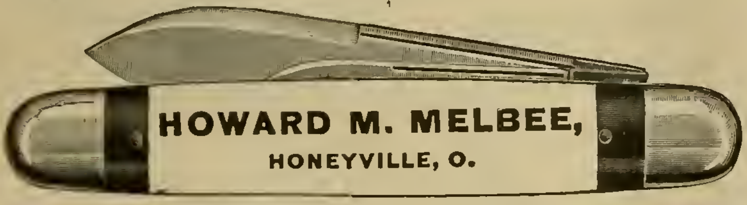

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nectar from the broken berries is no doubt correct, and no wonder, but that is not the question that sends such a glow under my linen collar.

In deprecating the statement regarding the bees immediately follows a cold-blooded accusation against the "sparrow pest." Now, that is not the *square deal* I am accustomed to find in the usually considerate American Bee Journal. I feel this is an oversight—don't believe the Editor was at home when the poor birds were called hard names. The little sparrow has a hard row to hoe, at best, without bearing the stings of malice heaped upon it by inconsiderate persons who constantly instigate their persecution and death. Let us all carefully investigate and give the little fellows a fair show. What have they done? Great good and but little harm, the latter only incidentally, as we all do. If the millions—nay, billions of insects which the sparrows destroy every year were allowed to mature and bear their kind, life would long since have been a hideous nightmare, and vegetation a thing of the past.

It is within my easy recollection when Eastern parks were made desolate by myriads of what are known as "inch worms"—the little caterpillar that fed so ravenously upon the leaves of the elms in particular, and all other trees in general. How they spun from ground to tree-tops in thousands, having a special predilection for resting on the fair, bare shoulders of the ladies reposing under the shade of some monarch trees. Soon the dames arose and left in disgust.

Since the considerable introduction of Mr. and Mrs. Sparrow, you can sit in the parks all day with never a vision of the crawly things.

Fate has ordained it that every long-eared amateur must dwell upon the vicious nature of everything living, of which they know little or nothing. What they do not know is, of course, not worth considering. Could they but think and observe they might have divined the real purpose sparrows have of pecking into fruit—not wantonly to destroy it, but to find the luscious little worm that is snugly nestling in that grape, or that peach, or that curculio-punctured plum. Just as the "yaller hammer" thrusts his strong bill to the core of a red-cheeked apple for the codling grub in its seed-bed, or as the robin steals off with the early-matured cherry, with its fat little wiggler waiting to develop and take its flight, so does Mrs. Sparrow persistently investigate for opportunities to find Palmer House fare for her ravenous fledglings. How can the birds help doing some harm in their effort to do great good?

By all means give the boys a chance to study bird-life around them, that they may learn of the beauty and usefulness of the birds they try to destroy because of the ignorant superstitions acquired from those whose opportunity for truthful study has been denied them. EM DEE.

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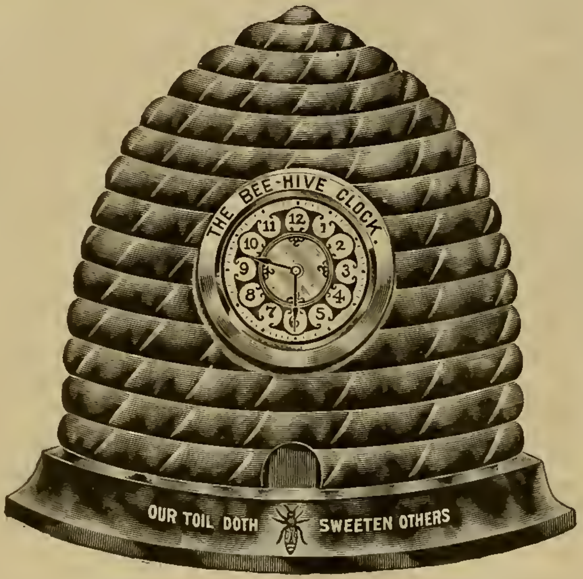
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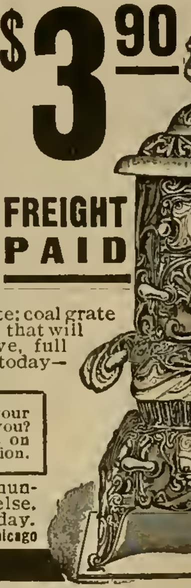

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Honey and Beeswax

CHICAGO, Dec. 6.—The trade in best grades of white comb honey has been fair, yet retailers taking only small quantities at a time. This honey brings 14@15c; other grades are difficult to place at from 1@3c per pound less. Extracted selling at 7@7½c per pound for white; amber 6½@7c; dark 5½@6c. Beeswax, when clean and of good color, 30c. R. A. BURNETT & CO.

CINCINNATI, Nov. 24.—The demand for comb honey is relaxing to some extent, owing to the majority of the trade being well supplied. All fears of a comb honey famine have been allayed. We quote fancy white comb honey at 14@16c. Extracted honey is in fair demand. Quote amber at 5¼@6½c, according to the package and quality. Fancy white and white clover extracted at 6½@8½c. We are paying 28½c per pound delivered here for choice yellow beeswax.

(We wish to call the attention of the producer to the above honey quotations, who mistakably expects to receive these prices for his product. The above are our selling prices.) THE FRED W. MUTH CO.

TOLEDO, Oct. 17—The honey market remains firm, with good demand, and prices the same as last quotations. Fancy white comb brings 15c; No. 1, 14c; fancy amber, 13c; buckwheat, 13c. Extracted, white clover, in barrels, 6¼@6½c; amber, in barrels, 5@5¼c; in cans, 1c to 1½c higher. Beeswax in good demand, 26c cash, 28c trade. GRIGGS BROS.

ALBANY, N.Y., Nov. 8.—Our honey market is in healthy condition; demand good; receipts about equal to demand. Prices are not quite as high as last year, but the tendency has been to work off the honey before cold weather, and we think the crop has come forward more than usual this season, which is a good sign. We quote: Fancy white clover, 15c; A No. 1, 14c; No. 1, 13c; buckwheat, fancy, 13c; A No. 1, 12c; No, 1, 11@12c; straight buckwheat is wanted in this market. Extracted, quiet: white, 7½c; mixed, 6½c; buckwheat, 6½c. Beeswax scarce at 30c. H. R. WRIGHT.

PHILADELPHIA, Nov. 20.—The demand has been very good for honey in the past 10 days. In fact, it takes a little sharp, cool weather to get people started, and when they do start, the demand continues for some months. We would say, now is the height of the honey season. We quote, in a jobbing way: Fancy comb, 15@17c; No. 1, 13@15c; amber, 12@13c. Extracted, fancy white, 7@8c; amber, 6½c. Beeswax firm at 28c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

INDIANAPOLIS, Dec. 15.—There is a tendency for higher prices on best grades of honey. The demand for strictly fancy white comb honey exceeds the supply. Demand for lower grades of comb honey not good. Numerous shipments of honey arriving, but no one producer seems to have very great quantities to offer. I quote fancy white at 15@16c; No. 1 in poor demand at 12c, and amber dull at 10c. Best grade extracted brings 8@9c in 60-lb. cans; amber slow at 6c. Beeswax, 30@33c. WALTER S. POUDER.

DENVER, Nov. 11.—No. 1 white comb honey, per case of 24 sections, $3.35; No. 1 light amber, $3.00; No. 2, $2 50@3.00. Extracted honey, 6¾@7 cts. per pound. Supply is light and we coud make quick sales of consignments at above figures. We pay 24c for clean, yellow beeswax delivered here.
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CINCINNATI, Dec. 18. — The nice weather holds back the demand for comb honey. Crops seem to be exceedingly short and producers in the West keep the prices high. We quote as follows: Fancy water-white and No. 1 white clover, 14@16c; No. 2, 12@14c. Extracted seems to be more plentiful, and we quote same in barrels, light amber, 5¼@5½c; in cans, ½c more; white clover, 7@8c. Beeswax, 28@30c.
C. H. W. WEBER.

NEW YORK, Dec. 6.—The demand for comb honey continues to be fair for all grades. Prices practically remain the same. We quote fancy white at 14@15c; No. 1 at 13c; No. 2 at 12c, and buckwheat at 10c per pound, Extracted honey is in good demand, especially California honey with large supplies. We quote white at 6½@7c; light amber at 6c; buckwheat, extracted, at 5½@6c per pound; Southern at 50@60c per gallon. Beeswax firm and steady at 29@30c per pound. HILDRETH & SEGELKEN.

SAN FRANCISCO, Dec. 6.—White comb, 1-lb, sections, 9@10 cents; amber, 7@8c. Extracted, waterwhite, 4¾@5c; white, 4½@4¾c; light amber, 4@4½ cents; amber, 3½@4c; dark amber, 3@3½c. Beeswax, good to choice, light, 26@27c; dark, 24@25c.

Honey is being offered more freely at appearing quotations than for some weeks past, and it now appears that growers are awakening to the fact that they can not force prices any higher by holding their honey. At these figures there should be a good profit to the bee-men and a small margin to jobbers. Hawaiian extracted ambsr is selling at 2½ cents, at primary points, but it is not likely that California apiarists have anything to fear from competion, as their crop is all marketed in England.

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